AUBERT & DUVAL 41, Rue de Villiers 92202 NEUILLY/SEINE FRANCE	PROCES-VERBAL DE RECEPTION TYPE 3.2 suivant NF EN 10204 INSPECTION REPORT TYPE 3.2 according to NF EN 10204	N° : A/607/7018-0/BV PAGE : 1/ 6

Livraison: LES ANCIZES le 02/07/1996 /BG Delivery N°:4940560101N/REF.494056 0101&0102	DESIGNATION-QUANTITE-DIMENSIONS-POIDS Description-Quantity-Dimensions-Weight
Nuance: SC 2104 W (Cr Ni 18.12 Mo N) Quality Etat de livraison: Hypertrempé Condition Laminage	35 barres dia. 75 ..... 2 338 kg Voir page 2/6
Commande et Spécifications Purchase Order & Specifications	C.E.R.N. - RECEPTION MEYRIN Site de Meyrin CH 1211 Genève 23 02039 SUISSE
Commande CS 5008023 du 01/02/96 Poste 1 Spécification 483 Révision 2	

ANALYSE/ANALYSIS Unité/Unit : %(m/m) sauf mention spécifique/except specific mention.

Coulée	C	Si	Mn	S	P	Ni	Cr	Mo	Fe
HY 2722 01 à 05	0.022 N2 0.143	0.58	1.73	<0.002	<0.025	12.99	17.57	2.70	Complt.

Réception sur Produit Livré Delivery Acceptance Test	Traction Tensile Test					Flexion par Choc Impact Test		Dureté Hardness
Etat Métallurgique Metallurgical Condition	Sens	Rm	Rp 0.2%	A% 5d	Z %	Sens		
		N/mm2	N/mm2					HB
Surlongueurs T.T. de livraison (1060°C/1h30mn/Eau)								
Lingot : HY 272203	L	647	310	48.5	85			167
Lingot : HY 272204	L	671	322	46.0	87			174

Résultats complémentaires Complementary Results — Observations / Remarks

HOMOGENEITE DU LOT : Vérifiée
ANNEXE DE REFERENCES : Page 3/6
MICROSTRUCTURE : Totalement austénitique
INCLUSIONS : Page 4/6
PERMEABILITE MAGNETIQUE : 1.0035
DEFAUTS OUVERTS : Ressuage page 5/6
DEFAUTS INTERNES : US page 6/6
DIMENSIONS : Conformes

Conforme à :
Spécification 483 Révision 2

Nota
certificati di materiali grezzi consegnati a mano dal CERN e impiegati per la fabbricazione di flange installate su CM M004
Ricevuto il 02/12/02

M. rifto = HY272204 - 05813

Nous certifions que, sauf exceptions ou dérogations énumérées ci-dessus, la fourniture citée a été fabriquée conformément aux spécifications techniques de la commande et que, toutes opérations de controle et essais effectués elle répond SOUS TOUS LES ASPECTS, aux spécifications particulières, aux plans, ainsi qu'aux normes en vigueur s'y rapportant.

Signatures et visas / signatures and visas

AUBERT & DUVAL
Pour le Directeur Général
et par délégation
Mr D. PICARD

BUREAU VERITAS J.C. CHAPUIS LYON

2/07/96

AD/CCC/01

A U B E R T & D U V A L 41, Rue de Villiers 92202 NEUILLY/SEINE FRANCE	CERTIFICAT DE CONTROLE TEST CERTIFICATE	N° : A/607/7018-0/BV PAGE : 2/ 6

Livraison: LES ANCIZES le 02/07/1996 /BG Delivery N°:4940560101N/REF.494056 0101&0102	**Commande et spécifications** Purchase order and Specifications
Nuance: SC 2104 W (Cr Ni 18.12 Mo N) Quality	Commande CS 5008023 du 01/02/96 Poste 1
Etat de livraison: Hypertrempé Condition Laminage	Spécification 483 Révision 2
	Lingot : HY 272203 & HY 272204

DESIGNATION - QUANTITE - DIMENSIONS - POIDS

14 barres dia. 75
Repères P2 - P3 -
A2 - A3 -
B2 - B3 -
C2 - C3 -
D2 - D3 -
E2 - E3 -
F2 - F3T.
926 kg
Lingot : HY 272203

21 barres dia. 75
Repères P1 - P2 - P3 -
A1 - A2 - A3 -
B1 - B2 - B3 -
C1 - C2 - C3 -
D1 - D2 - D3 -
E1 - E2 - E3 -
F1 - F2 - F3.T
1 412 kg
Lingot : HY 272204

Observations	Signatures et visas
	2/07/96 BUREAU VERITAS J.C. CHAPUIS LYON AUBERT & DUVAL Pour le Directeur Général et par délégation Mr D. PICARD

AD/CCD/01

AUBERT & DUVAL 41 rue de Villiers 92202 NEUILLY S/SEINE - FRANCE -	ANNEXE DE REFERENCES APPENDIX FOR REQUIREMENTS	N° A/607/7018-0/BV PAGE : 3/6

Usine : des ANCIZES Le 02/07/96 Livraison : N/REF. 494 056/01/01 & 01/02	Commande et Spécifications Purchase order and Specifications
Nuance : SC 2104 W (Cr Ni 18.12 Mo N) Quality	Commande CS 5008023 du 01/02/96 Poste 1 Spécification 483 Révision 2
Etat de livraison : Hypertrempé Condition Laminage	Coulée : Lingot HY 272203 Cast HY 272204

COMPOSITION CHIMIQUE SPECIFIEE

Composition chimique		Tolérances
Composants	Teneur en %	En dessus du maximum En dessous du minimum
Cr	16-18.5	0.20
Ni	12-14	0.15
C	0.030 max.	0.005
Si	1 max.	0.05
Mn	2 max.	0.04
Mo	2-3	0.10
N	0.14-0.20	0.01
P	0.045 max.	0.01
S	0.030 max.	0.005
Fe	Le reste	

CARACTERISTIQUES MECANIQUES SPECIFIEES

Rm N/mm2	≥ 600
Rp N/mm2	≥ 300
A %	≥ 35
HB	160/190

Observations Remarks	Signatures et Visas Signatures and Visas
Conforme à Spécification 483 Révision 2	4/7/96 BUREAU VERITAS J.C. CHAPUIS LYON AUBERT & DUVAL Pour le Directeur Général et par délégation Mr D. PICARD

AUBERT & DUVAL 41, Rue de Villiers 92202 NEUILLY/SEINE FRANCE	CERTIFICAT DE CONTROLE TEST CERTIFICATE	N° : A/607/7018-0/BV PAGE : 4/ 6

Livraison: LES ANCIZES le 02/07/1996 /BG Delivery N°:4940560101N/REF.494056 0101&0102	Commande et spécifications Purchase order and specifications
Nuance: SC 2104 W (Cr Ni 18.12 Mo N) Quality	Commande CS 5008023 du 01/02/96 Poste 1
Etat de livraison: Hypertrempé Condition Laminage	Spécification 483 Révision 2
	Lingot : HY 272203 & HY 272204

INCLUSIONS

Lingot : HY 272203

Type d'inclusions		Nombre de champs T m	T e	C m	C e	P m	P e
A	0.5						
	1						
	1.5						
	2						
	2.5						
B	0.5	3				1	
	1						
	1.5						
	2						
	2.5						
C	0.5						
	1						
	1.5						
	2						
	2.5						
D	0.5	15	1	16	1	18	2
	1	2		1		3	
	1.5						
	2						
	2.5						

Lingot : HY 272204

Type d'inclusions		Nombre de champs T m	T e	C m	C e	P m	P e
A	0.5						
	1						
	1.5						
	2						
	2.5						
B	0.5	3		2		1	
	1						
	1.5						
	2						
	2.5						
C	0.5						
	1						
	1.5						
	2						
	2.5						
D	0.5	16	2	15	2	17	2
	1	3		2		1	
	1.5						
	2						
	2.5						

Observations	Signatures et visas
	8/07/96 BUREAU VERITAS J.C. DUPUIS LYON AUBERT & DUVAL Pour le Directeur Général et par délégation Mr D. PICARD

AD/CCD/01

AUBERT & DUVAL 41 rue de Villiers 92202 NEUILLY S/SEINE - FRANCE -	CERTIFICAT DE CONTROLE PAR RESSUAGE LIQUID PENETRANT EXAMINATION	N° A/607/7018-0/BV PAGE : 5/6

Usine : des Ancizes **Le** 28/05/96 **Livraison :** N/REF. 494056 01/01 et 01/02	**DESIGNATION - QUANTITE - DIMENSIONS - POIDS** Designation - Quantity - Dimensions - Weight
Nuance : SC 2104W (Cr Ni 18.12 Mo N) Quality **Etat de livraison :** Hypertrempé Condition Laminage	35 barres dia. 75 ..... 2 338 kg Voir page 2/6
Commande : CS 5008023 du 01/02/96 Order Poste 1 **Coulée :** HY 272203 Cast HY 272204	**Documents applicables :** Applicable document ANC 181/n - Gamme RCE1

CONDITIONS D'EXAMEN / Examination conditions

Stade du contrôle : Final
Inspection stage

Etat de surface Usiné
Surface finish

Etendue du contrôle : Totalité de la surface
Examination coverage

Produits de nettoyage : Acétone
Cleaning agents

Pénétrant **Type :** COLORE **Marque :** BABB CO **Référence :** **N° de lot** VP30 - Lot N°3485
Penetrant Trade mark Reference Lot number

Produits d'élimination de l'excès de pénétrant : Eau
Agents for removal of excess penetrant

Révélateur : Humide **Référence :** **N° de lot** D70 - Lot N°3538
Developer Trade mark Reference Lot number

Température :, 20°C
Temperature

CONDITIONS OPERATOIRES / Inspection process

Nettoyage préalable Precleaning	**Méthode** Method	: DSC selon ANC 185/c
	Mode de séchage Drying method	: Chiffons
	Durée de séchage Drying time	: 5 mn
Application du pénétrant Penetrant application	**Méthode** Method	: Pulvérisation
	Durée de contact Dwell time	: 30 mn
Elimination de l'excès de pénétrant Removal of excess penetrant	**Méthode** Method	: Pulvérisation
	☐ lavage eau pulvérisée-pression : 1,7 Bar ☐ émulsification - durée : ☐ solvant	
Séchage : Drying	**Méthode** Method	: Chiffons
	Température Temperature	:
Application du révélateur Developer application	**Méthode** Method	: Pulvérisation
Examen Examination	**Conditions d'éclairement :** Lighting conditions	> 2150 Lux
	Durée d'appréciation des indications après révélation : Time for estimating indications	10 à 30 mn

9/1/96

BUREAU VERITAS J.C. CHAPUIS LYON

Observations
Remarks

Conforme à
Procédure ANC 181 n - Gamme RCE1
Spécification 483 Révision 2

Signatures et Visas
Signatures and Visas

AUBERT & DUVAL
P. BUENDIA

AUBERT & DUVAL
Pour le Directeur Général
et par délégation
Mr D. PICARD

Niveau 2 - COFREND

AUBERT & DUVAL
41 rue de Villiers
92202 NEUILLY S/SEINE - FRANCE.

CERTIFICAT DE CONTROLE PAR ULTRA-SONS
ULTRASONIC TEST CERTIFICATE

N° A/607/7018-0/BV
PAGE : 6/6

Usine : des Ancizes Le 08/06/96
Livraison : N/REF. 494056 01/01 et 01/02

DESIGNATION - QUANTITE - DIMENSIONS - POIDS
Designation - Quantity - Dimensions - Weight

Nuance : SC 2104W (Cr Ni 18.12 Mo N)
Quality
Etat de livraison : Hypertrempé
Condition Laminage

35 barres dia. 75 ..... 2 338 kg

Voir page 2/6

Commande : CS 5008023 du 01/02/96
Order Poste 1

Coulée : HY 272203
Cast HY 272204

Documents applicables :
Applicable document
Procédure ANC 1521/C - Code U 30A

CONDITIONS D'EXAMEN / Examination conditions

Stade du contrôle : Après traitement
Inspection stage
Etendue du contrôle : 100% du volume
Examination coverage
Etat de surface : Usiné
Surface finish
Produit de couplage : Eau
Couplant

APPAREILLAGE UTILISE / Ultrasonic equipment

Appareil / Instrument
Marque : KRAUTKRAMER.
Trade mark
Type : USIP 12
Type
Référence : 29372.1061
Reference

Traducteur / Search unit

Onde* Wave	Marque Trade mark	Réf. / Type Ref. / Type	Angle (°) Angle	Fréquence MHz Frequency	Surface d'émission Input pulse area
L	A.D.	P5/K99	0°	5	78,5 mm2

Réglage de l'appareil / Instrument Adjustment

Sens de sondage :
Orientation

Onde* Wave Type	Onde* Wave Sens	Traducteur Type / Réf. Search unit Type /Ref.	Etalon Standard	Etalonnage Calibration	Puissance Energy	Amplification Magnification (dB)
L	R	P5/K99	N7	Etalon TFP Ø 1,2 à 80 mm : 80% HE (Avec DAC) Surveillance de l'écho de fond	-	48

* L : Longitudinale / Longitudinal
T : Transversale / Shear
A : Axial / Axial
C : Circonférentiel / Circumferential
O : Oblique / Angled
R : Radial / Radial

Observations
Remarks

Conforme à
Procédure ANC 1521 c - Code U 30 A
Spécification 483 Révision 2

BUREAU J.C. CHAPUIS 6/7/96

Signatures et Visas
Signatures and Visas

AUBERT & DUVAL
P. BUENDIA
Niveau 2 - COFREND

AUBERT & DUVAL
Pour le Directeur Général
et par délégation
Mr D. PICARD

R : Remise de document / Certificat

VERITAS

PLAN DE CONTRÔLE ET D'INSPECTION
CONTROL AND INSPECTION PLAN

483-0

RONDS DECAPES DE PRECISION H12/H15

Phase de fabrication - *Manufacturing schedule*	ESSAIS - *TESTS*	ID	Prelevement	CP Parag. 3.2. specif.	CP N	MP	PP H.B.	PP Structure	PP Inclusions *	PP Ferrite	PP Permeabilité	PP Permutation (spectr.)	Marquage	UT	PT Ressuage	Dim	V	Dossier
	CQ																	
	BV																	
	CL																	
Ronds forgés hypertrempés	CQ	H	H	H	H	H	H	H	H		H	H	X		X	X		
	BV	W2	H	C1	C1	W1	W2	W2	H		C1	C1	X		X	X		
	CL																	
	CQ																	
	BV																	
	CL																	
	CQ																	
	BV																	
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	CL																	
	CQ																	
	BV																	
	CL																	
	CQ																	
	BV																	
	CL																	

Essais effectués
Modes d'intervention (Voir au dos)
Performed tests
Intervention methods *(Turn please)*

CQ Contrôle Qualité Fournisseur — *Supplier Quality Control*
BV Inspection BUREAU VERITAS — *BUREAU VERITAS Inspection*
CL Inspection client — *Customer Inspection*

NOTA
NOTE
* toujours sur le coté tête, milieu, pied
L.S.

Lieu d'exécution :
Manufacturing plant :

Client
Contrat no. 599.205 N/Fi
CERN/BV

BV
AT 329.231/B CN 132

Page 2 / 2

1651

T. S. V. P. - *Turn please*

RIAL VACUUM
ULTRA HIGH VACUUM AND CRYOGENICS

Via T. E. Manzini 7/A – Loc.
Scarzara
43040 Parma – Italy
Ph. +39 0521 949311
Fax +39 0521 949300

sales@rialvacuum.com
www.rialvacuum.com

Tabella corrispondenza codici-grezzi

DISEGNO	MATERIALE	FORNITORE	CERTIFICATO
LHCMB__S0024	316LN	EDELSTAHL	191531/7072741
LHCMB__S0025	316LN	EDELSTAHL	191531/7072741
LHCMB__S0031	304L	FORONI	1480/2000
LHCMB__S0032	304L	FORONI	1480/2000
LHCMB__S0033	304L	FORONI	1480/2000
LHCMB__S0039	304L	SCAM	82350
LHCMB__S0042	304L	FORONI	1480/2000
LHCMB__S0043	304L	FORONI	1480/2000
LHCMB__S0121 pos 1	316L	EDELSTAHL	191531/7072741
LHCMB__S0121 pos 2	316L	EDELSTAHL	191531/7072741
LHCMB__S0123	304L	EDELSTAHL	403975/7143316
LHCMB__S0127	304L	EDELSTAHL	403975/7143316
LHCMB__S0130	316L	EDELSTAHL	191531/7072741
LHCMB__S0179 Assemblato			
pos 1 tubo	304L	MARCEGAGLIA	25348/22
pos 2 fondo	304L	OUTOKUMPU	884318/002
pos 3 flangia	304L	COGNE	2001019411
LHCMB__S0180 Assemblato			
pos 1 tubo	304L	MARCEGAGLIA	25348/22
pos 2 fondo	304L	OUTOKUMPU	884318/002
pos 3 flangia	304L	COGNE	2001019411
LHCMB__S0244	304L	COGNE	2001019411
LHCMB__S0245 Complessivo			
LHCMB__S0246	304L	EDELSTAHL	403975/7143316
LHCMB__S0247	304L	EDELSTAHL	403975/7143316
LHCMB__S0248	304L	COGNE	2001019411
tubo 70x2	316L	SIDERINOX	63528
tubo 48,3x2	304L	MARCEGAGLIA	22234/22
LHCMB__S0094 Complessivo			
LHCMB__S0113 Sub-complessivo			
LHCMB__S0214 Sub-complessivo			
POS 1 flangia (S0028/8/B5)+POS 2 colletto	304L	COGNE	2001019411
POS 3 tubo	304L	AVESTA	904689/002/A
LHCMB__S0030 pos 1	304L	COGNE	2001019411
LHCMB__S0030 pos 2	304L	EDELSTAHL	403975/7143316
LHCMB__S0030 pos 3	304L	EDELSTAHL	406671/7144220
LHCMB__S0030 pos 4	304L	EDELSTAHL	406671/7144220
LHCMB__S0029	304L	SCAM	82350
LHCMB__S0044	304L	FORONI	1480/2000
LHCMB__S0045	304L	FORONI	1480/2000
LHCDCCMA0040 Assemblato			
tubo flex / treccia	316L / 304L	ARINOX / TIM	39415 / 218
attacco tubo flex	316L	ROLDAN	2000/94.942
LHCMB__S0131	316L	VILLARES	O14020

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Fax +39 0521 949300

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www.rialvacuum.com

Tabella corrispondenza codici-grezzi

DISEGNO	MATERIALE	FORNITORE	CERTIFICATO
LHCMB__S0100 Assemblato			
tubo	304L	AVESTA	904689/002/A
colletto	304L	SANDVIK	A/02-946620
LHCMB__S0101	304L	SIDERINOX	63528
LHCMB__S0183 Complessivo			
LHCMB__S0184 Sub-complessivo			
pos 1 flangia	304L	COGNE	2001019411
pos 2 tubo	304L	MARCEGAGLIA	25348/22
pos 3 fondo	304L	OUTOKUMPU	884318/002
pos 4 tubo	304L	ALCE	99/0294
pos 5 CF40	304L	ROLDAN	2000/94.942
LHCMB__S0236	304L\Cu	METALPARMA	2903

ALCE

ALCE S.r.l.
VIA PER CASTELLETTO, 15/17
20080 ALBAIRATE (MI) ITALY
TEL. (02) 9406739/94920079
FAX (02) 9406389
TEL./FAX LAB. PROD. (02) 9406722

CERTIFICATO DI COLLAUDO
TEST CERTIFICATE
ABNAHMEPRÜFZEUGNIS
CERTIFICAT D'EMPREUVES
DIN 50049 - 3 . 1B
EN 10204 - 3 . 1B

N. DI CERTIFICATO / *Certificate N.* 99/0294

PAG. N. / *Sheet N.* 1 DI / *of*

DATA / *Date* 07/06/99

CLIENTE / *Customer*
RIAL VACUUM -S.P.A.-
VIA TITO ED ETTORE MANZINI 7a
43040 LOC. SCARZARA PARMA

NS. COMMESSA N. / *Our job n.* 9V/000319 — DATA / *Date* 12/05/99

BOLLA DI CONSEGNA / *Delivery bill* B9000417 — Del 08.06.99

ORDINE / *Order n.* 90331 — DATA / *Date* 11/05/99

NORMA DI ESECUZIONE / *Test specification / Abnahmenorme / Specification* ASTM A312-95a/A530-98

POS. N. *Item N.*	ACCIAIO *Steel / Stahl Acier*	DESCRIZIONE *Description*	N. TUBI	Mt	Kg	COLATA *Heat*	N. DI PROVA *Test N.*
01	TP 316L ASTM	42.2X1.6X5/7000	16	108	175	048712	70

PROVA *Test N.*	DIM. PROVETTA *Dim. of specimen* LUNG. LARGH. Ø i SPESSORE *Thickness Ø* mm	PESO LARGH. Ø e *Width Ø e* mm	SEZIONE *Section*	PRELIEVO *Samping* Pos. Prov. *Pos. Specim.*	TEMP. PROVA *Test temperature* C	Lim. di snervamento *Yeld Point Proof stress* Reh Rp 0,2 N / mm 2	Rp 1,0 N / mm 2	Carico di rottura *Tensile strenght* Rm N / mm 2	Allungamento *Elongation* A 5 LO = %	Piega *Bend test*	DUREZZA *hardness hârtversuch dureté* tipo - *type* - *typ*	PROVA IDRAULICA *hydrostatic test epreuve hydraulique* Bar MPa	*EDDY CURRENT*
RICHIESTO		MIN			20	170		485	35		HR 15T		
REQUIRED		MAX									90		
70	1.63	12.50	20.4	1	20	322	340	629	50		84/84.2	17	

ALLARGAMENTO / *FLARING*

SCHIACCIAMENTO / *FLATTENING* SATISFACTORY

NO Material:SEAMLESS TUBE

RICHIESTO *(Required)*		C %	Mn %	Cr %	Ni %	Mo %	Si %	S %	P %	Ti %	
	MIN	0	0	16	10	2	0	0	0	0	0
POS.	COLATA / *HEAT* MAX	.035	2	18	15	3	.75	.03	.04	0	0
01	048712	.019	1.79	17.49	11.41	2.15	.26	.009	.025	0	0
01	check 048712	.022	1.77	17.53	11.4	2.1	.33	.007	.025	0	0

TRATTAMENTO TERMICO / *heat treatment*

BRIGHT ANNEALED AT 1060°C

CONTROLLO VISIVO E DIMENSIONALE / *visual and dimensional control*

SATISFACTORY — OK / OB [X]

Il materiale è conforme alle norme richieste nell'ordine.
The material as been furnished in accordance with the requirements.
Le material a ete trouve conforme aux exigences.
Die gestellten Anforderungen sind erfuellt.

ENTE COLLAUDATORE / *Inspector*

ALCE S.r.l.
QUALITY CONTROL DEPT.

ALCE S.r.l.
Trafilerie - Tubi Acciaio inox
RESP. GARANZIA QUALITÀ
Carrara Giovanni

ALCE QUALITY SYSTEM IS APPROVED IN ACCORDING TO ISO 9002 - EN 29002

metal parma S.a.S.
di CAVALLI ALBERTO & C.
Via R. Tagliani, 32/A - 43026 PARMA
Partita IVA 01658170343

SPETT.LE
. 'AL VACUUM SPA
VIA TITO ED ETTORE MANZINI, 7/A
43040 – LOC. SCARZARA-PARMA

DICHIARAZIONE DI CONFORMITA'

DATA	DOCUMENTO N.	RIF. VS. ORDINE	CODICE CLIENTE	
23/05/2002	2903 – 23/05/2002	02/00508 DEL 23/05/2002	00000912	
MATERIALE	RAME ETP TUBO TONDO COTTO 12X10			
COLATA				
LEGA	CU ETP – UNI 5649-65			

ANALISI CHIMICA

COMPOSIZIONE CHIMICA	SI	FE	CU	MN	MG	ZN	TI	CR	NI	ZR	PB	BI	AL
			99,9 99,99										
RISCONTRATO													
COMPOSIZIONE CHIMICA	SN	SB	CO	S	P	C	BE	TA	NB			IMPURITA'	
RISCONTRATO													

CARATTERISTICHE MECCANICHE

	CARICO DI ROTTURA KG / MM	CARICO DI SNERVAMENTO KG / MM	ALLUNGAMENTO		DUREZZA BRINNELL HB
			A5	A2'' Or4D	
PRESCRITTO	300 370		5		75 90
RISCONTRATO					

metal parma S.a.S.
di CAVALLI ALBERTO & C.

SANDVIK

CERTIFICATE

No. A/02-946620 Rev 00
Date 2002-03-06 Page 1/2

INSPECTION CERTIFICATE acc to
EN 10 204 3.1.B

INSPECTION STAMP
QA-TUBE

Customer References

FAX 730

Customer order 2001-10-16

250-00991 STEELCENTE

Sandvik References

Order No.	Subs No.	ABSS Dispatch note
145534	26311	34336/54
ABSS No.	**C.Code**	
300-51576	37	

Material description
STAINLESS HOT FINISHED HOLLOW BAR

Steel making process
Electric furnace

Steel/material Designations

Sandvik	AISI
SANMAC 304L	TP304L

Technical requirements
Analysis and mechanical tests
acc to ASTM A-511-96

EXTENT OF DELIVERY

It	Product designation	Heat	Lot	Pieces	Kg
51	THB-SANMAC304L-112-90 112.00 X 11.00	455112	24217	3	531.0
			Total	3	531.0

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	N
455112	0.011	0.39	1.23	0.029	0.025	18.38	9.27	0.068

Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	N
455112	0.012	0.39	1.24	0.030	0.022	18.38	9.31	0.068

Tensile test at room temperature

	Yield strength N/mm2	Tensile strength N/mm2	Elongation %
Lot	Rp0.2	Rm	2"
24217	259	602	51

Following controls/tests have been satisfactorily performed:
- Material Identification

Quality assurance - Carl-Filip Lindahl/ QA-manager Tube & Pipe
MTC Service / Certificates

AvestaPolarit STAINLESS

ABNAHMEPRUEFZEUGNIS 3.1.B
DIN EN 10204 3.1B AD-W2

904689/002/A 1(01)
Date Datum Date
23.10.01

Delivery address, Empfänger, Lieu de livraison	BESTELLER
VALINOX ITALIA S.R.L. VIA DEI FRASSINI, 63 36100 VICENZA VI ITALY	VALINOX ITALIA S.R.L. VIA DEI FRASSINI, 63 36100 VICENZA VI ITALY

Requirements, Anforderungen, Exigences
ASTM A240-00 ASME SA-240 2001 SEC 2
TRB 100 / AD-W2 DIN 17441 02.97

Our Order No., Unser Auftrag Nr., Notre commande n°: 90412

Your order, Ihre Bestellung, Votre commande: ORDER 002000240

Product, Erzeugnis, Produit: BAND , NICHTROSTEND

Mark of Manufacturer, Zeichen des Lieferwerkes, Signe de producteur

Process, Erschmelzungsart, Mode de fusion: AOD

Inspector's stamp, Zeichen d. Sachverst., Poinçon de l'expert

Grade, Werkstoff, Nuance: TYPE 304L 1.4301

Tolerances, Toleranzen, Tolérances: DIN 59382, EN 10259: 1997

Marking, Kennzeichnung, Marquage: 304L 2B

Marks, Versandzeichen, Marques: VALINOX ITALIA

Line / Reihe / Ligne	Item / Position / Poste	Chargentest No. / Schmelze-Probe Nr. / Coulée n°	Size, Abmessungen, Dimensions	Quantity / Stückzahl / Nombre	Weight, Gewicht, Poids	Finish / Ausführung / Fini
1	8	01733 5	3,0 X 1500 MM		9130 KG	2B

Charge no., Schmelze Nr., Coulée n° — Chemical composition, Chemische Zusammensetzung, Composition chimique

Charge no.	C %	Si %	Mn %	P %	S %	Cr %	Ni %	N %
01733	0,022	0.47	1,79	0,023	0,001	18,2	8,2	0,048

Mechanical properties, Mechanische Eigenschaften, Caractéristiques mécaniques

Line / Reihe / Ligne	Location / Ort / Lieu	Rp0.2 N/mm²	Rp1.0 N/mm²	Rm N/mm²	A5 %	A50 %	%	Hardness / Härte / Dureté HB30
1	E	312	347	626	56	52		174
	A	310	347	618	57	54		170

UEBERPRUEFT NACH AD-W0/TRD 100 DURCH TUEV NORD E.V. MIT VERZICHT AUF GEGENZEICHNUNG UND ZUSTIMMUNG ZUR AUSSTELLUNG VON UNTERSCHRIFTSLOSEN ABNAHMEPRUEFZEUGNISSEN 3.1B (AZ.: 121W163320)

Identity test, Verwechslungsprüfung, Contrôle d'identification: O.B.
Size, Abmessungen, Dimensions: O.B.
Surface, Oberfläche, Surface: O.B.
Test of intergran. corros, Prüfung auf interkrist. Korros, Test d'anticorros. intercrist.
ASTM A262 PRACTICE E GENUEGEND

A = Beginning / Anfang / Début
E = End / Ende / Fin

VALINOX ITALIA s.r.l.
COPIA CONFORME
ALL'ORIGINALE
Articolo: 1500x 4000
Q.tà cons.:
Rif.ti: HS Belle 31551

X TUBISTEEL

We certify that the above mentioned products comply with the terms of the order contract.
Wir bestätigen, dass die Lieferung den Vereinbarungen der Bestellannahme entspricht.
Nous certifions que les produits énumérés ci-dessus sont conformes aux prescriptions de la commande.

This test certificate is made by controlled ADP-system and is valid without signature.
Dieses Zeugnis wurde von einem überprüften Datenverarbeitungssystem erstellt und ist ohne Unterschrift gültig.
Ce certificat a été établi par un système informatique contrôlé et est valide sans signature.

AvestaPolarit Stainless Oy

Authorised inspector, Werkssachverständiger, Inspecteur autorisé: TIMO KAUPPILA

FIN-95400 Tornio, Finland
Tel. +358 16 4521, Fax +358 16 452180.
www.avestapolarit.com
Domicile: Tornio, Finland. Trade register number: 500.630

..Ott. 2002 15:39 TUBISTEEL SRL Nr.6389 P. 4

MARCEGAGLIA S.p.A.

MARCEGAGLIA - LOMBARDA TUBI - PROFILNASTRO - BROLLO - NUOVA FORSIDERA - RESCO - NORTEO NORD - MARCEGAGLIA IMPIANTI

Sede legale e amministrativa: via Bresciani, 16 - 46040 Gazoldo degli Ippoliti - Mantova - Italy
Tel. +39 . 0376 685 1 Fax +39 . 0376 685 600 www.gruppomarcegaglia.com
Stabilimento di Forlì: via E. Mattei, 20 - 47034 Forlimpopoli - Forlì - Italia
Tel. +39 . 0543 470 111 Fax +39 . 0543 470 105

CERTIFICATO DI COLLAUDO
Test certificate
Abnahmeprüfzeugnis
Certificat de contrôle
Nr.

IN ACCORDO CON
EN 10088-2 3.1B
EN 10204 3.1B

Cliente	Ordine del cliente / Customer's order / Bestellung / Commande du client	Ordine Marcegaglia S.p.A. / Mill order / Unsere Auftragsbestätigung / Notre confirmation de commande	Data / Date / Datum / Date
LEINOX S.R.L.	3521	724355	22/07/02

Tipo di acciaio / Steel type / Stahlsorte / Nuance acier	Norma di collaudo / Test specification / Prüfungsnormen / Specification	Tolleranze / Tolerances / Toleranzen / Tolérances	Trattamento termico / Heat treatment / Wärmebehandlung / Traitement thermique
1.4404	DIN 17457 PK1	EN ISO 1127 D3/T3	

Tubi saldati longitudinalmente / Welded tubes / Längsnahtgeschweisste Rohre / Tubes soudé

Dimensioni / Dimensions / Abmessungen / Dimensions mm	Quantità / Quantity / Menge / Quantité m	Peso / Weight / Gewicht / Poids kg	Pezzi N. / Pieces N. / Stückzahl N. / Pièces N.	Stato di fornitura / Condition supply / Lieferzustand / Etat de commande	Fabbricante colla	Colata N. / Heat N. / Schmelze N. / Coulée N.	%C	%Mn	%Si	%P	%S	%Cr	%Ni	%Mo	%Ti	%Co
												16.50	10.00	2.00		
							0.030	2.00	1.00	0.045	0.030	18.50	14.00	2.50		
40.3X2.0			61			557563	0.020	1.25	0.34	0.022	0.012	16.89	11.04	2.18		

Collaudo N. / Test N. / Probe Nr. / Essais N.	Snervamento / Yield str. / Limite élastique 0,2% N/mm²	Snervamento 1% N/mm²	Rottura / Tensile strength / Zugfestigkeit / Résistance rupture N/mm²	Allungamento / Elongation / Dehnung / Allongement %5d	Durezza / Hardness / Härte / Dureté Tipo - Type - Typ HRB	Svasatura / Flaring test	Schiacciamento / Flattening test / Ringfaltversuch / Aplatissement	Piega rovescio / Reverse bend test	Mandrinatura anello	Prova idraulica	C.N.D. / Eddy current test	Antimiscuglio / Anti mixing test	Prova di bordatura / Flange test
Valori richiesti / Required values / Anforderungen / Caractéristiques demandées	>= 190	>= 225	490-760	>= 35									
	291	320	596	49					OK		OK	OK	

Prova di trazione / Tensile test: secondo / according to / gemäß / en accord avec ☐

Prova di corrosione intercristallina secondo / Intergranular corrosion test according to / Prüfung auf interkristalline Korrosion gemäß / Essai de corrosion intergranulaire en accord avec ☐

Controllo visivo e dimensionale / Visual and dimensional control / Sicht- und Abmessungskontrolle / Contrôle visuel et dimensionnel: OK

OMOLOGAZIONE AQUAP
DA N° 2094 A N° 2101 DA N° 5010/6 A N° 5011/6
DA N° 7443-00-TU A N° 7440-00-TU
DA N° 7450-00-TU A N° 7455-00-TU

Marcatura / Marking / Kennzeichnung / Marquage

13	5	6	7	8	10	12	13	14	2

COPIA CONFORME ALL'ORIGINALE LEINOX

Legenda:
1 Sigla produttore / Manufacturer mark / Zeichen des Lieferwerks / Estampe du producteur
2 Norma di collaudo / Test specification / Prüfungsnormen / Spécification
3 Tipo acciaio 1 / Grade 1 / Werkstoff 1 / Nuance 1
4 Tipo acciaio 2 / Grade 2 / Werkstoff 2 / Nuance 2
5 Colata / Heat / Schmelze / Coulée
6 Saldato / Welded / Geschweisst / Soudé
7 Stato di fornitura / Supply condition / Lieferzustand / État de commande
8 Laminato - Non laminato / Inside bead removed - not remove / Innennaht geglättet - nicht geglättet / Laminé - Pas Laminé
9 Tubo Crudo - Ricotto / Not annealed - Annealed Tube / Ungeglüht - Geglühtes Rohr / Pas Recuit - Recuit
10 Tipo di classe / Class type / Prüfklasse / Série
11 Tubo N° / Tube N. / Rohr Nr. / Tube N.
12 Prevede il certificato / With test mill / mit Werksabnahmezeugnis / Demande le certificat
13 Provato Eddy current / Eddy Current Tested / Wirbelstromgeprüft / Eprouvé courant de Foucault
14 Diametro e spessore in mm / Diameter and thickness mm / Aussendurchmesser und Wanddicke mm / Diamètre et épaisseur en mm
15 Diametro e spessore schedula / Diameter and thickness schedule / Aussendurchmesser und Wanddicke schedule / Diamètre et épaisseur en schedule

RINA QUACER CISQ ISO 9002

Osservazioni

CHEMICAL COMPOSITION REFERS TO THE RAW MATERIAL USED

QUALITY — GRUPPO MARCEGAGLIA

Avviso spedizione / Shipping notice / Versandanzeige / Avis d'expedition

Allegati Certificato CND / Enclosed: Certificate NDT / Anlagen ZfP Zeugnis / Annexés: Certificat CND

Noi certifichiamo che il prodotto fornito è conforme ai requisiti dell'ordinazione.
We certify that material supplied complies with the requirements agreed on order.
Es wird bestätigt, dass die Lieferung den Vereinbarungen bei der Bestellannahme entspricht.
Nous certifions que le produit fourni est conforme à la qualité de la commande.

MARCEGAGLIA S.p.A.

Mod. 105 13 02 012 REV.0 - 03/10/2000

.Ott. 2002 15:40 TUBISTEEL SRL

MARCEGAGLIA S.p.A.

Sede legale e amministrativa: via Bresciani, 16 - 46040 Gazoldo degli Ippoliti - Mantova - Italy
Tel. +39 . 0376 685 1 Fax +39 . 0376 685 600 www.gruppomarcegaglia.com
Stabilimento di Forlì: via E. Mattei, 20 - 47034 Forlimpopoli - Forlì - Italia
Tel. +39 . 0543 470 111 Fax +39 . 0543 470 105

CERTIFICATO DI COLLAUDO
Test certificate
Abnahmeprüfzeugnis
Certificat de contrôle
Nr. 25348/22

IN ACCORDO CON
EN 10088-2 3.
EN 10204 3.

Cliente / Customer / Kunde / Client	Ordine del cliente / Customer's order / Bestellung / Commande du client	Ordine Marcegaglia S.p.A. / Mill order / Unsere Auftragsbestätigung / Notre confirmation de commande	Data / Date / Datum / Date
LEINOX S.R.L.	4684	733905	12/09/0

Tipo di acciaio / Steel type / Werkstoff / Nuance acier	Norma di collaudo / Test specification / Prüfungsnormen / Spécification	Tolleranze / Tolerances / Toleranzen / Tolérances	Trattamento termico / Heat treatment / Wärmebehandlung / Traitement thermique
1.4404	DIN 17457 PK1	EN ISO 1127 D3/T3	

Tubi saldati longitudinalmente / Welded tubes / Längsnahtgeschweißte Rohre / Tubes soudés

Pos. N.	Dimensioni / Dimensions / Abmessungen / Dimensions mm	Quantità / Quantity / Menge / Quantité m	Peso / Weight / Gewicht / Poids kg.	Pezzi N. / Pieces N. / Stückzahl N. / Pièces N.	Stato di fornitura / Condition supply / Lieferzustand / Etat de commande	Fabbricante coils / Steel mill / Coils maker	Colata N. / Heat N. / Schmelze N. / Coulée N.	%C	%Mn	%Si	%P	%S	%Cr	%Ni	%Mo	%Ti	%Co
													16.50	10.00	2.00		
								0.030	2.00	1.00	0.045	0.030	18.50	14.00	2.50		
1	84X2.0			19			558106	0.015	1.27	0.37	0.026	0.010	16.52	11.07	2.23		

Composizione chimica / Chemical Analysis / Chemische Analyse / Composition Chimique

Collaudo N. / Test N. / Probe Nr. / Essai N.	Snervamento / Yield str. / Grenze / Limite élastique 0,2% N/mm²	Snervamento / Yield str. / Dehngrenze / Limite élastique 1% N/mm²	Rottura / Tensile strength / Zugfestigkeit / Résistance rupture N/mm²	Allungamento / Elongation / Dehnung / Allongement %Lo= 500	Durezza / Hardness / Härte / Dureté Tipo - Type - Typ HRB	Svasatura / Flaring test / Ringaufdornversuch / Evasement	Schiacciamento / Flattening test / Ringfaltversuch / Aplatissement	Piega rovescio / Reverse bend test / Ratournement	Mandrinatura anello / Ring expanding test / Mandrin. ann.	Prova idraulica / Hydrostatic test / Epreuve hidraulique	C.N.D. / Eddy current test / Contrôle non destructif	Antiniscuglio / Anti mixing test / Verwechslungsprüfung	Prova di bordatura / Flange test / Bordelage
Valori richiesti / Required values / Anforderungen / Caractéristiques demandées	>= 190	>= 225	490-760	>= 35									
Pos. N. 1	286	316	593	50					OK		OK	OK	

Prova di trazione / Tensile test / Zugversuch / Essai de traction — secondo / according to / gemäß / en accord avec ☐

Prova di corrosione intercristallina secondo / Intergranular corrosion test according to / Prüfung auf Interkristalline Korrosion gemäß / Essai de corrosion intergranulaire en accord avec ☐

Controllo visivo e dimensionale / Visual and dimensional control / Sicht-und Abmessungskontrolle / Contrôle visuel et dimensionel: OK

OMOLOGAZIONE ADUAF
DA N° 2064 A N° 2101 DA N° 6010/8 A N° 6011/8
DA N° 7442-08-TU A N°7443-08-TU
DA N° 7450-08-TU A N°7453-08-TU

Marcatura / Marking / Kennzeichnung / Marquage

1	3	5	6	7	8	10	12	13	14	2

CONFORME ALL'ORIGINALE
LEINOX

Legenda
1. Sigla produttore / Manufacturer's trade mark / Zeichen des Lieferwerks / Tampon du producteur
2. Norma di collaudo / Test specification / Prüfungsnormen / Spécification
3. Tipo acciaio 1 / Grade 1 / Werkstoff 1 / Nuance 1
4. Tipo acciaio 2 / Grade 2 / Werkstoff 2 / Nuance 2
5. Colata / Heat / Schmelze / Coulée
6. Saldato / Welded / Geschweisst / Soudé
7. Stato di fornitura / Supply condition / Lieferzustand / Etat de commande
8. Laminato - Non laminato / Indian bead removed - not removed / Innennaht geglättet - nicht geglättet / Laminé - Pas Laminé
9. Tubo Crudo - Ricotto / Not annealed - Annealed Tube / Ungeglühtes - Geglühtes Rohr / Pas Recuit - Recuit
10. Tipo di classe / Class type / Prüfklasse / Sorte
11. Tubo N° / Tube N. / Rohr Nr. / Tube N.
12. Prevede il certificato / With test mill / Mit Werkszeugnis / Demande le certificat
13. Provato Eddy current / Eddy Current Tested / Wirbelstromgeprüft / Epreuve courant de foucault
14. Diametro e spessore in mm / Diameter and thickness mm / Aussendurchmesser und Wanddicke mm / Diamètre et épaisseur en mm
15. Diametro e spessore schedula / Diameter and thickness schedule / Aussendurchmesser und Wanddicke schedule / Diamètre et épaisseur en schedule

RINA — QUACER — ISO 9002 — CISQ

Osservazioni
THE CHEMICAL COMPOSITION REFERS TO THE RAW MATERIAL USED

QUALIT

Avviso spedizione / Shipping notice / Versandanzeige / Avis d'expédition	Allegati Certificato CND / Enclosed: Certificate NDT / Anlagen ZfP Zeugnis / Annexe: Certificat CND	Noi certifichiamo che il prodotto fornito è conforme ai requisiti dell'ordinazione. / We certify that material supplied complies with the requirements agreed on order. / Es wird bestätigt, dass die Lieferung den Vereinbarungen bei der Bestellannahme entspricht. / Nous certifions que le produit fourni est conforme à la qualité de la commande.	MARCEGAGLIA S.
254659			

Via Gramsci, 41/A
16037 Sestri Levante (Ge) Italia
Tel. +39 0185 3661
Fax +39 0185 366320
E-mail: arinox@tin.it

Cap. Soc. 32.500.000.000 I.V.
Reg. Imp. di Chiavari n. 6437
R.E.A. di Genova n. 316714
Cod. Mecc. GE 006278
Cod. Fisc. 03086810102
Part. IVA IT 00203820998

Arinox s.r.l.

394_5-

ABNAHMEPRÜFZEUGNIS - CERTIFICATO DI COLLAUDO - TEST CERTIFICATE

(NACH DIN 50049 / 3. 1B - EN 10204 / 3. 1B) Mod. 10.4 REV. 1
(SECONDO DIN 50049 / 3. 1B - EN 10204 / 3. 1B)
(IN ACCORDANCE WITH DIN 50049 / 3. 1B - EN 10204 / 3. 1B)

PRÜF Nr.:
N. COLLAUDO:
TEST Nr.:

BESTELLER: Tubiflex SpA
CLIENTE:
CUSTOMER: Via Valeggio 41 Torino TO

FINITURA: BA

PRÜFGENSTAND: BÄNDER AUS NICHTROSTENDEM STAHL
PRODOTTO: ROTOLI DI ACCIAIO INOSSIDABILE
PRODUCT: COILS

ALTRE SPECIFICHE: ASTM A 240

ANFORDERUNGEN: EN 10088/2 - DIN 17441
SPECIFICA: SECONDO EN 10088/2 - DIN 17441
SPECIFICATION: IN ACCORDANCE WITH EN 10088/2 - DIN 17441

ERSCHMELZUNGSART:
PROCESSO DI FUSIONE: E
MELTING PROCESS:

WERKSTOFF: 1.4404
UNIFICAZ. TEDESCA:
GERMAN UNIFICATION:

MARKENBEZEICHNUNG:
TIPO D'ACCIAIO S31603
STEEL TYPE:

BESTELL Nr.:
ORD. CLIENTE N.: N. A0.938 DEL 5.4.02
CUST. ORD. Nr.:

UNSERE BESTÄTIGUNG:
Ns. CONFERMA ORDINE N.: 50-25819 Pos. 0001
OUR CONFIRMATION Nr.:

ANALYSE / ANALISI / ANALYSIS

BAND Nr. / N. ROTOLO / COIL Nr.	SCHMELZE Nr. / N. COLATA / HEAT Nr.	% C	% Mn	% Si	% P	% S	% Cr	% Ni	% Mo	% Ti	% Nb	ZUSÄTZLICHE ELEMENTE % / ELEMENTI AGGIUNTIVI / ADJOINT ELEMENTS	
												N	
148119	821339	0,020	1,130	0,550	0,027	0,001	17,400	11,100	2,050			0,048	

DIE OBENGENANNTE SCHMELZE IST BESTÄNDING GEGEN INTERKRISTALLINE KORROSION GEMÄß DIN 50914
IL MATERIALE È RESISTENTE ALLA CORROSIONE INTERGRANULARE SECONDO DIN 50914
THE MATERIAL IS RESISTENT TO INTERCRYSTALLINE CORROSION IN ACCORDANCE WITH DIN 50914

WÄRMEBEHANDLUNG - LÖSUNGSGLÜHEN UND ABSCHRECKEN 1110 (°C)/H_2/H_2O
TRATT. TERMICO - RICOTTURA DI SOLUBILIZZ.
HEAT TREATMENT - SOLUTION ANNEALING

EINE PRÜFUNG AUF WERKSTOFFVERWECHSLUNG WURDE DURCHGEFÜHRT: OHNE BEANSTANDUNG
ESITO DELL'ESAME DI CORRISPONDENZA TRA I TIPI DI ACCIAIO: FAVOREVOLE
THE CORRESPONDENCE BETWEEN THE STEEL TYPES IS ASSURED

ERGEBNIS DER PRÜFUNGEN / RISULTATI DELLE PROVE / TEST RESULTS

ZURGVERSUCH: (S. TAFEL) NACH DIN 50145-50114/50125 / PROVA DI TRAZIONE / TENSILE TEST — PROBENLAGE QUER / PROVETTA TRASVERSALE / TRANSVERSAL SPECIMEN

BAND Nr. / N. ROTOLO / COIL Nr.	STÜCKZAHL / PEZZI / PIECES	GEGENSTAND (MM) / PRODOTTO (mm) / PRODUCT (mm)	(*)	DEHNGRENZE SNERVAMENTO YIELD STR. Rp 0,2 % N/mm²	DEHNGRENZE SNERVAMENTO YIELD STR. Rp 1 % N/mm²	ZUGFESTIGKEIT ROTTURA ULT. STRENGHT Rm N/mm²	DEHNUNG ALLUNG.TO ELONG. % A 80 mm (#)	GEWICHT PESO WEIGHT Kg.	HÄRTE DUREZZA HARDNESS	FALTVERSUCH PROVA DI PIEGA BEND TEST
ANFORDERUNGEN / CARATTERISTICHE RICHIESTE / REQUIRED CHARACTERISTICS				⩾	⩾		⩾			
148119	2	0,250 163,00	TR	304	337	623	51	1170	HV 159	OK

(*) T: TESTA/START/ANFANG; C: CODA/END/ENDE — TR = TRASVERSALE/TRANSVERSAL/QUER LO = LONGITUDINALE/LONGITUDINAL/LANGS
(#) A 50 mm. PER SPESSORE < 0,20 mm. O PRODOTTO INCRUDITO – (#) A 50 mm. FOR THICKNESS < 0,20 mm. OR HARD FINISH – (#) A 50 mm. FÜR DICKE < 0,20 mm. ODER HARTGEWALZTE AUSFÜHRUNG

BESICHTIGUNG UND AUSMESSUNG. OHNE BEANSTANDUNG
RISULTATI DELL'ISPEZIONE E CONTROLLO DIMENSIONALI: FAVOREVOLI
INSPECTION AND DIMENSIONAL CONTROL RESULTS ARE SATISFACTORY.

ERGEBNIS DER PRÜFUNG: DIE GESTELLTEN ANFORDERUNGEN SIND ERFÜLLT
ESITO DEL COLLAUDO: LE RICHIESTE SONO SODDISFATTE
TEST RESULT: THE MATERIAL IS SATISFACTORY AND IN ACCORDANCE WITH SPECIFICATION REQUIRED

COPIA CONFORME
ALL'ORIGINALE
Tubiflex
ASS. QUALITA'

07/05/02
Sestri Levante,

Arvedi

Arinox s.r.l.
Sestri Levante (GE) Italia
Der Werkssachverständige
MILLS INSPECTOR
L'ISPETTORE AUTORIZZATO

LOTTO : 02.3080 Colata : 821339

TIM
GRUPO USINOR

TREFILADOS INOXIDABLES DE MÉXICO, S.A. DE C.V.
AVE. OTOMIES S/N
CD. IND. XICOHTENCATL II C.P. 90500
HUAMANTLA, TLAX., MÉXICO
TELS. (012) 47 23157; (012) 47 23159; FAX (012) 47 23160

CERTIFICATE OF CONFORMANCE
No.: 818

SOLD TO		SHIP TO	
	TEVI Srl VIA GENOVA 14 PONTE DELL'OLIO (PIACENZA). 29098 ITALY		TEVI Srl C/O TUBIFLEX SPA CONTO DEPOSITO NO. 03/2001 STRADA TORINO, 25 ORBASSANO (TO), 10043 ITALY

Customer		Reference Numbers		Date
Number	P.O.	Work Order	Lot	
C037	CD.33	OP0000604	L0000753	4/04/02

ITEM DESCRIPTION

	Qty Ship	Heat Number	Ø	Tolerances
Stainless steel wire 0.40mm AISI 304, Annealed, Bright, DIN200 black spool TUBIFLEX ITEM No:M162	6,285 Kgs	146057	0.400	± 0.010

CHEMICAL ANALYSIS

C %	.050	Si %	.410	Mn %	.790	Ni %	8.890	Cr %	18.220
Mo%	.340	N %	.049	S %	.0049	P %	.0260	Cu %	.430

MECHANICAL PROPERTIES

No.	Ø mm	Tol mm	Rm Mpa	Rpo.2 Mpa.	A L100 %	
0001	0.396	0.004	793		44%	
0002	0.394	0.006	781		46%	
0003	0.396	0.004	765		45%	
0004	0.399	0.001	752		44%	

Average Diameter mm	Rm Min Mpa.	Rm Max Mpa.			
0.396	703	793			

NOTES

COPIA CONFORME ALL'ORIGINALE
TUBIFLEX spa
ASS. QUALITA'

Packing List No. 366

Box No.1 weight	1,046 Kgs
Box No.2 weight	1,051 Kgs
Box No.3 weight	1,047 Kgs
Box No.4 weight	1,042 Kgs
Box No.5 weight	1,053 Kgs
Box No.6 weight	1,056 Kgs

Authorized signature

ABR-6. 8.APR.2002 9:45 TIM TRAF.BEDINI VENDITE 723160 A:00033 NR.831 P.14 P:14

LOTTO : 02.5441 Colata : 146057

SIDERINOX S.p.A.
Frazione Caselle 20081 - MORIMONDO (Milano) Italia
Ufficio Commerciale Tel. 029498151 Fax 02949815250 - 251
Ufficio Amministrativo Tel. 029498181 Fax 02949816350
Ufficio Spedizioni Tel. 0294981622 Fax 02949816350 E-Mail sx@siderinox.it http://www.siderinox.it

Certificato di collaudo N° 63528 del 12/03/2002

Cliente: LEINOX S.R.L.

Numero Bolla: 20505 del 12/03/2002

Conferma d'ordine Siderinox N° 2001/ORC/ 4393 | Ordine Cliente N° 4393

DESCRIZIONE DEL MATERIALE

Descrizione prodotto: Tubo tondo saldato in acciaio inossidabile laminato a freddo spazzolato

Dimensioni: 70 x 2 mm	Quantità MT: 144	Colata: 51A7	Fattore di saldatura: V = 1

Tipo acciaio - norma di prodotto: AISI 316L/Z2 CND 17-12 sec. NF A 49147

Tipo tolleranza dimensionale: Tolleranza UNI EN ISO 1127-D3/T3

COMPOSIZIONE CHIMICA DELLA COLATA

I valori chimici si riferiscono al certificato rilasciato dalla Acciaieria

N° Colata	% C	% Mn	% P	% S	% Si	% Cr	% Ni	% Mo	% Ti	% Cu
Valore minimo Valore massimo	0,03	2,04	0,045	0,035	1,05	16 16,2	10,5 13,15	1,9 2,5	0	1
51A7	0,019	1,281	0,026	0,001	0,374	16,952	11,313	2,171	0	0

RISULTATI DELLE PROVE

N° Prova	Classe di prova	PROVA DI TRAZIONE in N/mm²=MPA								DUREZZA	
		Snervamento				Carico rottura		Allungamento			
		Rp 0,2%		Rp 1%		Rm		A%		HRB	
		Minimo 195	Massimo	Minimo	Massimo	Minimo 490	Massimo 690	Minimo 35	Massimo	Minimo	Massimo 80
23451	N.P.	313		0		621		45,6		85,3	

Prova di schiacciamento secondo NF EN 10233
OK

Prova di svasatura secondo NF EN 10234
OK

Prova antimiscuglio:
N.P.

Prova di tenuta secondo Contrôle Courent de Foucault 100%
OK

Prova corrosione intercristallina secondo NFA 05-159
OK

Controllo non distruttivo Eddy Current secondo N.P.
/

Controllo dimensionale: OK

Esame visivo: OK

COPIA CONFORME ALL'ORIGINALE LEINOX

Si dichiara che il materiale fornito è conforme a quanto concordato all'ordinazione

Nota

Morimondo, 12/03/2002

Documento rilasciato dal Responsabile di Laboratorio
A. Scarioni
A. Scarioni

Documento convalidato dal Rappresentante aziendale autorizzato
M. Bertani

Mod. 10A

ROLDAN, S.A.
aceros inoxidables

FABRICA
SANTO TOMAS DE LAS OLLAS, S/N
APDO DE CORREOS 11
PONFERRADA (LEON)
TELEFONO: (987) 44 61 00
FAX: (987) 44 61 01
E-MAIL: roldansa@mx3.redestb.es

OFICINA CENTRAL
SANTIAGO DE COMPOSTELA, 100-3.°
28035 MADRID (ESPAÑA)
TELEF.: (91) 398 52 57
FAX: (91) 398 51 93
E-MAIL: roldan@acxgroup.com

CERTIFICADO DE INSPECCION
INSPECCTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS
CERTIFICAT DES PRODUIT
EN 10.204.3.1.B

2.000/92.942	FECHA/DATE: 29/11/2000
N.° ALBARAN: 2.000/ 7.860	Hoja num. 1
MATERIAL / GRADE / WERKSTOFF / NUANCE: ROLDAMAX-264 AISI (316L)	

TÜV CERT DIN ISO 9002

CLIENTE / CUSTOMER / BESTELLER / CLIENT
METALSTEEL DIVISIONE DI SO.GE.PAR. SPA

TOLERANCIA / TOLERANCE / TOLERANZ / TOLERANCE
ISO h11

PRODUCTO / PRODUCT / PRUFGEGENSTAND / PRODUIT
Barra pelata.

REQUERIMIENTOS / REQUIREMENTS / ANFORDERUNGEN / EXIGENCES
AISI

DIMENSIONES / DIMENSIONS / ABMESSUNGEN / DIMENSIONS
80,00mm.

LONGITUD / LENGHT / LÄNGE / LONGEUR
6.100 mm.

N.° CONTRATO / ORDER N.° / BESTELL N.° / N.° CONTRACT	MARCA/CAJA / MARKS/BOX / MARKE/BOX / MARQUE/CAISSE	N.° COLADA / CAST N.° / SCHMELZEN N.° / N.° COULEE	PESO / WEIGHT / GEWICHT / POIDS
LE40745	45055/RB45506	C31058	738
"	45056/RB45507	C31058	737
"	45057/RB45508	C31058	738
"	45058/RB45509	C31058	738

CARACTERISTICAS MECANICAS / MECHANICAL PROPERTIES / MECHANISCHE EIGENSCHAFTEN / CARACTERISTIQUES MECANIQUES

N.° COLADA / CAST N.° / SCHMELZEN N.° / N.° COULEE	RT Nw/mm2	E 0.2% Nw/mm2	E 1% Nw/mm2	RA	A% %L 5 d	DUREZA / HARDNESS / HÄRTE / HB	RESILIENCIA J
C31058	608	321	367	67	46	153	
CONDICIONES IMPUESTAS / REQUIRED VALUES / SOLLWERTE / EXIGENCES							

COPY CONFORMING TO THE ORIGINAL
METALSTEEL
Divisione di So.Ge.Par. S.p.A.
LUCA [illegible]
SIGNATURE

COMPOSICION QUIMICA % / CHEMICAL COMPOSITION % / CHEMISCHE ZUSAMMENSETZUNG % / COMPOSITION CHIMIQUE %

N.° COLADA / CAST N.° / SCHMELZEN N.° / N.° COULEE	C	P	S	Si	Mn	Cr	Ni	Mo	Ti	Cu
C31058	0,0260	0,0300	0,0280	0,3210	1,5970	17,1250	10,6680	2,1100	0,0040	0,4950
CONDICIONES IMPUESTAS / REQUIRED VALUES / SOLLWERTE / EXIGENCES	0,0300	0,0450	0,0300	0,7500	2,0000	16,0000 / 18,0000	10,0000 / 14,0000	2,0000 / 3,0000		

Vs. Ord. TEL
Ns. Bolla 23281A
del 12/04/00

OBSERVACIONES / OBSERVATIONS / BEMERKUNGEN / OBSERVATIONS

INSPECCION DIMENSIONAL Y VISUAL
SURFACE AND DIMENSIONS CONTROL
BESICHTIGUNG UND MASSKONTROLLE WURDEN DURCHGEFÜHRT
INSPECTION DIMENSIONELLE VISUELLE
WITHOUT OBJECTIONS

CORROSION INTERGRANULAR
INTERGRANULAR CORROSION
INTERKRISTALLINE KORROSION
CORROSION INTERGRANULAIRE
ASTM-A-262-98 PRACTICE "E" SATISFACTORY

OTROS ENSAYOS
OTHER TEST RESULTS
SONSTIGE PROFUGEN
AUTRES ESSAIS

CONTRASEÑA DEL SUMINISTRADOR
TRADE MARK
HERSTELLERZEICHEN
SIGLE DU PRODUCTEUR

SELLO DEL RECEPCIONADOR
INSPECTOR STAMP
VERSTANDINGEN
SIGLE DE L'AGENT RECEPTIONNAIRE
R3

SISTEMA DE FABRICACION
STEELMAKING PROCESS
ERSCHMELZUNGSART
ELABORATION
EAF+AOD+CC

POR CONTROL DE CALIDAD
QUALITY INSPECTOR
DER ABNAHMEBEAMTE
L'AGENT RECEPTIONNAIRE
JOAQUIN DIEGUEZ GONZALEZ

QUALITY CONTROL REPRESENTATIVE
No necesaria firma según EN 10.204

CL_ROL_30

COGNE ACCIAI SPECIALI S.R.L.
11100 AOSTA - VIA PARAVERA, 16
TEL +39.0165.3021 - FAX +39.0165.302296
CAP. SOC. 40.020.000.000 INT. VERS.
VAT: IT00571320076
P.I. 00571320076 C.F. 02187360967
REG. IMP. AO003 - 7234 REA 50474

(A02) CERTIFICATO DI COLLAUDO SECONDO DIN 50049/EN 10204 - 3.1.B
(A03) NUMERO DEL DOCUMENTO 2001019411

(A06) COMMITTENTE .: COGNE DISTRIBUZIONE ITALIA SRL
(A07) ORDINAZIONE DEL COMMITTENTE .: OdA: IT72 4500025211
(A01) STABILIMENTO PRODUTTORE .: AOSTA, VIA PARAVERA 16
(A05) REDATTORE DEL DOCUMENTO .: SERVIZIO QUALITA'
(A08) CONFERMA D'ORDINE DEL PRODUTTORE : D7100754 /10 (A04) SIGLA STABILIMENTO PRODUTTORE .: COGNE

SPECIFICA : CAS-E REGOLA TECNICA :
(B01) PRODOTTO .: 3132 SPE Sgrossati di pelatura Tondi HSTD
(B04) STATO DI FORNITURA .: RS Ricotto Solubilizzato
(B11) DIMENSIONI DEL PRODOTTO (MM): 110,000 (B12) LUNGH. DEL PRODOTTO (MM): 04000 /06000
(B02) QUALITA' ACCIAIO .: WN.1.4301-4307 MARCA INTERNA : F304L1
(B08) NUMERO DI COLATA .: 170025 (B07) NUMERO DI SCHEDA .: 417710
(B06) MARCATURA DEL PRODOTTO .: SIGLA SOST. N. COLATA : 771

CONFORMITA' ALLA NORMA EN 10088/3 WN.1.4301
CONFORMITA' ALLA NORMA DIN 17440, W.1.4307
CONFORMITA' ALLE SPECIFICHE: ASTM A276-96, A182/A182M-96, A193/A193M -1996 B8, A320/A320M-94A B8, A479/A479M-96
CONFORMITA' NORMA SS2332 - NFA 35 574 Z7 CN 18-09
CONFORMITA' ALLA NORMA SIS 2333
CONFORMITA' ALLA SPECIFICA NF A35-574/90, NUANCE Z3 CN 19-09
FABBRICAZIONE AL FORNO ELETTRICO + AOD + COLATA CONTINUA

(C71) COMPOSIZIONE CHIMICA - ANALISI DI COLATA

Ref.	020000030921									
ELEMENTI -	C	Si	Mn	P	S	N	Cr	Mo	Ni	Cu
OTTENUTO	0,017	0,420	1,840	0,027	0,025	0,088	18,100	0,420	8,500	0,480
ELEMENTI	Co									
OTTENUTO	0,100									

PROVA DI DUREZZA ALLO STATO DI FORNITURA

Ref.	020000031310		
NORMA	EN 10003	PROVA DI DUREZZA	HB
OTTENUTO	182,0		

PROVA DI TRAZIONE ALLO STATO DI FORNITURA

Ref. 020000031310
NORMA EN 10002 (C02) ORIENTAMENTO DELLE PROVETTE: L

UNITA' DI MISURA	RM NMM	RP02 NMM	A % 5.0 D	Z %	RP1 NMM
OTTENUTO	611,00	306,00	56,00	75,00	350,00
	605,00	299,00	56,40	76,00	342,00
	605,00	297,00	56,60	76,00	339,00
	599,00	293,00	57,20	77,00	338,00

IL MATERIALE E' STATO CONTROLLATO AL 100% X ANTIMISCUGLIO
CONTROLLO VISIVO SUPERFICI E DIMENSIONI: CONFORME.

COGNE ACCIAI SPECIALI S.R.L.
11100 AOSTA - VIA PARAVERA, 16
TEL +39.0165.3021 - FAX +39.0165.302296
CAP. SOC. 40.020.000.000 INT. VERS.
VAT: IT00571320076
P.I. 00571320076 C.F. 02187360967
REG. IMP. AO003 - 7234 REA 50474

NON E' STATA ESEGUITA ALCUNA RIPARAZ. DEL MATERIALE MEDIANTE SALDATURA
IL MATERIALE NON E' STATO CONTAMINATO DA MERCURIO
PROVA DI CORROSIONE (SEC. DIN50914-EN114-ASTM A262): CONFORME
LA FORNITURA E' CONFORME ALLE PRESCRIZIONI CONTRATTUALI
MATERIALE PRODOTTO IN UN SISTEMA DI G.D.Q. IN ACCORDO CON LE NORME
UNI EN ISO9002.94 E QS-9000 ED.3 MAR.98 (QUEST'ULTIMA SOLO PER BARRE IN
ACCIAO LAMINATE-PELATE-RETTIFICATE), CERTIFICATO DA I.G.Q.

(Z01) DATA 03.07.2001

FIRMA AUTORIZZATA DALLA A.Q. Cogne Acciai Speciali S.r.l.

VILLARES METALS SA
SUMARÉ PLANT / HEAD OFFICE
R. Alfredo Dumont Villares, 155
13177-900 - Sumaré - SP
BRAZIL
Phone: 55 19 864-8000 - Fax: 55 19 864-8164
http://www.villares.com.br
e-mail: metals@villares.com.br

INSPECTION CERTIFICATE

CERT. Nr. 014020

ACC. TO DIN 50049 3.1.B / EN10204 3.1.B

CUSTOMER *VILLARES STEEL INTERNATIONAL B. V.* INVOICE *309*

PURCHASE ORDER Nr./ITEM *52324*

VILLARES METALS REFERENCES

JOB ORDER Nr. (OS) *3859 (40069170101)* LOT Nr. *3859* PACKAGE Nr. *3859/01*

VILLARES GRADE	SIMILAR GRADE
V316XLUF	*WNR14404VIMAC/316L*

ATTENDED SPECIFICATIONS
DIN 17440 / SET/96

MELTING PROCESS	PRODUCT LINE	HEAT TREATMENT CONDITION	FINISHING
Electric Arc Furnace	*Forged*	*Solution Treated*	*Peeled*

NET WEIGHT	QUANTITY	PRODUCT	DIMENSIONS (mm)	LENGTH RANGE (mm)
3.0 kg	*3*	*Round Bar*	*170.00 Tol (-)0.000 (+)1.000*	*2500 / 5700*

CHEMICAL COMPOSITION (% in weight) HEAT Nr. *0777263*

C	*0.023*	*Si*	*0.41*	*Mn*	*1.94*	*P*	*0.037*	*S*	*0.02*	*Co*	*0.09*	*Cr*	*17.30*	*Mo*	*2.15*	*Ni*	*10.50*		
Cu	*0.27*	*N*	*0.076*																

HARDNESS ACC. TO SPECIFICATION ASTM A370
156 HB

VISUAL & DIMENSIONAL INSPECTIONS
RESULT: APPROVED

ULTRA SONIC TEST ACC. TO SPECIFICATION ASTM A388
RESULT: APPROVED

ANTI-MIXTURE TESTING
RESULT: APPROVED

TENSILE TEST
SPECIMEN #: 5506 DIMENSION (mm): 12.0 UNIT: MPA T. STRENGTH TRANSVERSE: 555 Y. STRENGTH 0,2% TRANSVERSE: 264 Y. STRENGTH 1,0% TRANSVERSE: 310 RED. OF AREA TRANSVERSE (%): 63.0 ELONG. TRANSVERSE (%): 55.7

IMPACT TEST
SPECIMEN #: 5506 TYPE: ISO NOTCH: V TEMPERATURE (ºC): ROOM DIRECTION 2: TRANSVERSE INDIVIDUAL RESULT 2A: 140.0 INDIVIDUAL RESULT 2B: 138.0 INDIVIDUAL RESULT 2C: 146.0 AVERAGE RESULT 2: 141.3 UNIT 2: J

GRAIN SIZE ACC. TO SPECIFICATION ASTM E112
RESULT: APPROVED
GRAIN SIZE RESULT: 3/5 ASTM

CORROSION RESISTANCE ACC. TO SPECIFICATION DIN 50914
RESULT: APPROVED

HEAT TREATMENT CYCLE
CYCLE 1: SOLUTION ANNEALED TEMPERATURE 1 (ºC): 1040 TIME 1 (h): 5.00 COOLING MEDIA 1: WATER

REMARKS
MATERIAL ALSO ATTENDS DIN EN10088/95 (1.4401/1.4404) , AISI316/316L , ASTM A182/96 (F316/F316L) , ASTM A276/A479-96 (316/316L) AND WNR1.4401

COPY CONFORMING TO THE ORIGINAL
METALSTEEL
Divisione di S.G.Ge.Par S.p.A.
SIGNATURE

METALSTEEL
Divisione di S.G.Ge.Par S.p.A.
RESPONSABILE CONTROLLO QUALITÀ

SUPPLIER MARK

OUR QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 9002

ISO 9002

10/09/1999

DIONÍSIO Q. ABREU

FORONI S.p.A. *21055 Gorla Minore (VA)* *ITALIA*	Marchio -		CERTIFIED MATERIAL TEST REPORT Certificato di collaudo EN 10204-3.1 B	Data 31/05/2000	Cert. N° 1480/2000 Rev. 0

Cliente	METALSTEEL di So.Ge.Par. S.p.A.	Ordine	452	Materiale	1.4307/1.4301 - F304L/F304 - T.304L/T.304 Materiale classe: FORMAC

Specifiche EN 10088-3 (04/95); ASTM A182-99*, A276-98b, A479-99a; Documento FORONI S.p.A. 21/01/2000.
(* Solo analisi chimica e proprietà meccaniche).

Posiz.	Descrizione	Dimensione - mm	Rapp. rid.	N° Pezzi	Peso Kg	Condizioni di fornitura	Elaborazione	Colata n°
11	Barra tonda D.	165	12.3	2	1880	FORGIATO, SOLUBILIZZATO E PELATO	E.F. / A.O.D.	00211 V.A.R. -

% Analisi chimica -

	C	Mn	Si	Cr	Ni	S	P	N											
Heat analysis	0.021	1.66	0.33	18.10	8.26	0.022	0.028	0.075											

Caratteristiche meccaniche -

Prova n°	Orient.	Temp. °C		Y.S. 0.2 % MPa	Y.S. 1% MPa	U.T.S. MPa	EL. % 5D	R of A. %	Durezza HB	Durezza HRC	Resilienza - Orient.	Resilienza - Temp. °C	Resilienza - KV J			Espansione laterale mm			Area duttile %		
9402/1	TRV		R.T.	262	299	577	55	59.1	146		TRV	R.T.	150	142	152						

Dim. grano
ASTM E112-96 4-5

Note -
- Solubilizzazione a 1060°C x ½ h / pollice - Acqua.
- Materiale fabbricato e collaudato secondo norma EN 10088-3, con analisi atta a garantire la conformità alle norme e gradi indicati.
- Materiale classe FORMAC ad alta lavorabilità.

Pz. 141
Vs. Ord. FAX
Ns. Bolla 2466/a
del 22/04/00

Il materiale è in accordo alle specifiche citate. Il materiale è stato fabbricato in conformità al programma di garanzia della qualità della FORONI S.p.A.

Q. A. Manual -
Data 10/01/2000

Rep. Ass. Qualità
SCQ - P.MONTI

Ispettore
SGQ - L.GALLAZZI

-Material made in Italy. **- No welds, no mercury and radioactive contamination.**

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 31.01.02

Zertifiziert nach:	ISO 9001 VDA 6, Teil 1	ADW 0 TRD 100	wk BRL-A 45.1 RW-TÜV

Abnahmeprüfzeugnis nach

Inspection Certificate acc.to / Certificat de réception selon DIN EN 10204 3.1B

Zeugnis-Nr. / Certificate No. / No.de Certificat 403975 / 7143316 / bit

Edelstahl Witten - Krefeld GmbH, D-58449 Witten
Metalsteel
Divisione SO.GE.PAR. SpA
Via Santa Sofia, 27
IT-20122 Milano

Herstellerzeichen / Supplier's Mark / Marque d'usine	wk
Prüfstempel / Inspector's stamp / Poincon de l'expert	QA

Warenempfänger
METALSTEEL
Divisione SO.GE.PAR SpA
Via per Montodine
IT-26012 Castelleone CR

Ihre Auftr.-Nr. Your order No. / No.de votre commande	**Bestelldatum** Date of order / Date du commande
700599 / 100	28.01.02
Unsere Auftr.-Nr. Our order No. / No.de notre Commande	**Unsere Material-Nr.** Our material No. / No.de notre matériel
123326 / 8	2117573
Unsere Abteilung / Our department / Notre département	**Telefon** / Telephone / Téléphone
VR2	02302 / 294837

Produkt / Product / Produit

STAEBE AUS NICHTROSTENDEM STAHL
REMANIT 4301/4307, TYPE 304/304L
GEWALZT, ABGESCHRECKT, GERICHTET,
GESCHAELT, SUPER IM
DIN 17440, AD-W2, AD-W10, EN 10088-3,
ASTM A 182/276/479, ASME SA 182/479,
QQS 763D, SIS 14 23 33-47, NFA 35-574,
NACE MR 01-75, AMS 5639, AMS 5647

Fertigungsauftr.-Nr. / Production lot-No. / Lot de fabrication No.	:
Lieferschein-Nr. / Delivery note / No. de l'avis de livraison	:
Schmelzen-Nr. / Heat No. / No.de coulée	: 403160
Stückzahl / Piece No. / Nombre des pièces	: 7
Gewicht / Weight / Masse	: 1990 [kg]
Zeichnungs-Nr. / Drawing No. / No.du dessin	:
Format / Shape / Profil	: rund / round / rond
Durchm./Breite / Diameter/width / Diamètre/largeur	: 90 [mm] + 0.540 / - 0.000 [mm]
Dicke / Thickness / Epaisseur	:
Länge / Length / Longueur	: 4000 - 6000 [mm]

Stückzahl und Gewicht siehe Rechnung.
Quantity and weight see delivery bill/invoice. / Nombre des piéces et masse voir facture.

Lieferzustand / Condition as supplied / Etat de livraison : 1050 °C Luft (beschleunigt)

Die Prüfergebnisse zu Ihrer Lieferung finden Sie auf der Rückseite bzw. den nächsten Seiten
As for test results of your delivery see overleaf. / Vouz trouverez les resultats d'essais de votre livraison aux pages suivantes.

EDELSTAHL WITTEN-KREFELD GMBH
Abnahmetechnik / Inspection department / Département de Réception

Krause
Der Werkssachverständige
Works' inspector / L'Agent Réceptionnaire de l'usine

Dieses Zeugnis wurde maschinell erstellt und ist gemäß DIN EN 10204 auch ohne Unterschrift gültig.
This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204.
Le certificat a été etabli sur systéme informatique et est aussi valable selon DIN EN 10204 sans signature.

5
33361A
03/06/02

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 31.01.02

Zeugnis-Nr. Certificate No. / No.de Certificat	Unsere Auftr.-Nr. Our order No. / No.de notre Commande	Ihre Auftr.-Nr. Your order No. / No.de votre commande	Fertigungsauftr.-Nr. Production lot-No. / Lot de fabrication No.
403975 / 7143316 / bit	123326 / 8	700599 / 100	

Schmelzen-Nr. / Heat No. / No.de coulée	Erschmelzungsart / Steelmaking process / Procédé d'élaboration	Sekundärmetallurgie / Secondary metallurgy / Metallurgie seconduire
403160	E	VOD

Chemische Zusammensetzung / Chemical Composition / Composition chimique

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	W	Co	Al	
Ist / Actual / Actuel	0.012	0.28	1.70	0.030	0.028	18.10	0.33	8.22	0.36	0.04	0.06	0.096	< 0.003	[%]
	N	**B**	**Ti**	**Nb**	**Ca**									
Ist / Actual / Actuel	0.076	0.0041	< 0.003	< 0.005	< 0.001									[%]

Härte / Hardness / Dureté

Lieferzustand / Condition as supplied / Etat de livraison

Proben-Nr. / Specimen-No. / No.d'eprouvette	69888	
Ist / Actual / Actuel	168	[HB]

HRC MAX 22

Zugversuch / Tensile test / Essai de traction

Lieferzustand / Condition as supplied / Etat de livraison

Probenabm. / Specimen dimension / Dimension d'éprouvette	**Probenrichtung** / Specimen direction / Sens de Prélèvement	**Prüftemp.** / Test temperature / Température d'essai
Zugprobe; 12,5 mm rd	längs / longitudinal / longueur	23 [°C]

Proben-Nr. / Specimen-No. / No.d'eprouvette	**Rpo.2** [MPa (N/mm²)]	**Rp1.o** [MPa (N/mm²)]	**Rm** [MPa (N/mm²)]	**A5** [%]	**A2''** [%]	**Z** [%]
69892	264	311	604	53.8	55.5	74
69891	260	320	615	52.0	54.0	74
69890	265	300	608	50.3	52.1	76
69889	266	309	607	54.8	56.6	75

Schlagbiegeversuch / Impact test / Essai de résilience

Lieferzustand / Condition as supplied / Etat de livraison

Probenform / Type of specimen / Type d'éprouvette	**Probenrichtung** / Specimen direction / Sens de Prélèvement	**Prüftemp.** / Test temperature / Température d'essai
[CHARPY V]	längs / longitudinal / longueur	23 [°C]

Proben-Nr. / Specimen-No. / No.d'eprouvette	**1. Prfl.** / Spec. / Eprouvette	**2. Prfl.** / Spec. / Eprouvette	**3. Prfl.** / Spec. / Eprouvette
69892	291 [J]	275 [J]	280 [J]
69891	279 [J]	278 [J]	273 [J]
69890	293 [J]	288 [J]	280 [J]
69889	288 [J]	284 [J]	289 [J]

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 31.01.02

Zeugnis-Nr. Certificate No. / No.de Certificat	Unsere Auftr.-Nr. Our order No. / No.de notre Commande	Ihre Auftr.-Nr. Your order No. / No.de votre commande	Fertigungsauftr.-Nr. Production lot-No. / Lot de fabrication No.
403975 / 7143316 / bit	123326 / 8	700599 / 100	

Interkristalline Korrosion / Intergranular corrosion / Corrosion intercristalline

ASTM A 262 PRACTICE E / DIN 50914

Die Lieferung wurde US geprüft

Die Lieferung wurde auf Identität geprüft (Spectro.)
Rißkontrolle wurde durchgeführt
Die Lieferung wurde besichtigt und auf Maß kontrolliert

Erläuterung/ Explanations/ Explications

¤ **Erschmelzungsart** / Steelmaking process / Procédé d'élaboration : **E** = Elektrostahl / Electric-arc-furnace steel / Acier électrique
¤ **Sekundärmetallurgie** / Secondary metallurgy / Metallurgie secondaire : **VOD** = Vakuum-Sauerstoff-Entkohlungs-Verfahren / Vacuum-Oxygen-Decarburization / Vacuum-Oxygène-Décarburation

Die Lieferung wurde aus einem bevorrateten, geprüften Abnahmelos entnommen.
Material against this delivery has been taken from a stored and tested inspection lot.
La livraison a été pris d'un lot de réception stocké et éprouvé.

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellungsannahme enspricht.
We hereby certify that the material described above has been tested and complies with the terms of the order.
Nous certifions que la livraison été vérifiée et est conforme aux stipulations de l´acception de la commande.

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 06.02.02

Zertifiziert nach:	ISO 9001 VDA 6, Teil 1	ADW 0 TRD 100	wk BRL-A 4.5.1 RW-TÜV

Abnahmeprüfzeugnis nach DIN EN 10204 3.1B
Inspection Certificate acc.to / Certificat de réception selon

Zeugnis-Nr. / Certificate No. / No.de Certificat 406671 / 7144220 / bit

Edelstahl Witten - Krefeld GmbH, D-58449 Witten
Metalsteel
Divisione SO.GE.PAR. SpA
Via Santa Sofia, 27
IT-20122 Milano

Herstellerzeichen / Supplier's Mark / Marque d'usine	wk
Prüfstempel / Inspector's stamp / Poincon de l'expert	QA

Warenempfänger
METALSTEEL
Divisione SO.GE.PAR SpA
Via per Montodine
IT-26012 Castelleone CR

Ihre Auftr.-Nr. Your order No. / No.de votre commande	**Bestelldatum** Date of order / Date du commande
700599 / 100	28.01.02
Unsere Auftr.-Nr. Our order No. / No.de notre Commande	**Unsere Material-Nr.** Our material No. / No.de notre matériel
123326 / 9	2117575
Unsere Abteilung / Our department / Notre département	**Telefon** / Telephone / Téléphone
VR2	02302 / 294837

Produkt / Product / Produit

STAEBE AUS NICHTROSTENDEM STAHL
REMANIT 4301/4307, TYPE 304/304L
GEWALZT, ABGESCHRECKT, GERICHTET,
GESCHAELT, SUPER IM
DIN 17440, AD-W2, AD-W10, EN 10088-3,
ASTM A 182/276/479, ASME SA 182/479,
QQS 763D, SIS 14 23 33-47, NFA 35-574,
NACE MR 01-75, AMS 5639, AMS 5647

Fertigungsauftr.-Nr. / Production lot-No. / Lot de fabrication No.	:
Lieferschein-Nr. / Delivery note / No. de l'avis de livraison	:
Schmelzen-Nr. / Heat No. / No.de coulée	: 385140
Stückzahl / Piece No. / Nombre des pièces	: 6
Gewicht / Weight / Masse	: 2149 [kg]
Zeichnungs-Nr. / Drawing No. / No.du dessin	:
Format / Shape / Profil	: rund / round / rond
Durchm./Breite / Diameter/width / Diamètre/largeur	: 100 [mm] + 0.540 / - 0.000 [mm]
Dicke / Thickness / Epaisseur	:
Länge / Length / Longueur	: 4000 - 6000 [mm]

Stückzahl und Gewicht siehe Rechnung.
Quantity and weight see delivery bill/invoice. / Nombre des piéces et masse voir facture.

Lieferzustand / Condition as supplied / Etat de livraison : 1050 °C Luft (beschleunigt)

Die Prüfergebnisse zu Ihrer Lieferung finden Sie auf der Rückseite bzw. den nächsten Seiten
As for test results of your delivery see overleaf. / Vouz trouverez les resultats d'essais de votre livraison aux pages suivantes.

EDELSTAHL WITTEN-KREFELD GMBH
Abnahmetechnik / Inspection department / Département de Réception

Krause
Der Werkssachverständige
Works' inspector / L'Agent Réceptionnaire de l'usine

Dieses Zeugnis wurde maschinell erstellt und ist gemäß DIN EN 10204 auch ohne Unterschrift gültig.
This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204.
Le certificat a été etabli sur systéme informatique et est aussi valable selon DIN EN 10204 sans signature.

15
3336/9
03/06/02

METALSTEEL
Divisione di So.Ge.Par. S.p.A.
RESPONSABILE
CONTROLLO QUALITÀ

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 06.02.02

Zeugnis-Nr. Certificate No. / No.de Certificat	**Unsere Auftr.-Nr.** Our order No. / No.de notre Commande	**Ihre Auftr.-Nr.** Your order No. / No.de votre commande	**Fertigungsauftr.-Nr.** Production lot-No. / Lot de fabrication No.
406671 / 7144220 / bit	123326 / 9	700599 / 100	

Schmelzen-Nr. / Heat No. / No.de coulée	**Erschmelzungsart** / Steelmaking process / Procédé d'élaboration	**Sekundärmetallurgie** / Secondary metallurgy / Metallurgie secondaire
385140	E	VOD

Chemische Zusammensetzung / Chemical Composition / Composition chimique

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	W	Co	Al	
Ist / Actual / Actuel	0.015	0.22	1.59	0.032	0.028	18.21	0.32	8.39	0.34	0.04	0.06	0.092	< 0.003	[%]
	N	B	Ti	Nb	Ca									
Ist / Actual / Actuel	0.072	0.0043	< 0.003	< 0.005	< 0.001									[%]

Härte / Hardness / Dureté

Lieferzustand / Condition as supplied / Etat de livraison

Proben-Nr. / Specimen-No. / No.d'eprouvette	58219	
Ist / Actual / Actuel	178	[HB]

HRC MAX 22

Zugversuch / Tensile test / Essai de traction

Lieferzustand / Condition as supplied / Etat de livraison

Probenabm. / Specimen dimension / Dimension d'éprouvette	**Probenrichtung** / Specimen direction / Sens de Prélèvement	**Prüftemp.** / Test temperature / Température d'essai
Zugprobe; 12.5 mm rd	längs / longitudinal / longueur	23 [°C]

Proben-Nr. / Specimen-No. / No.d'eprouvette	**Rpo.2** [MPa (N/mm²)]	**Rp1.o** [MPa (N/mm²)]	**Rm** [MPa (N/mm²)]	**A5** [%]	**A2"** [%]	**Z** [%]
58224	278	318	620	50.9	52.5	76
58223	273	317	617	51.7	53.6	77
58222	273	322	609	55.1	57.0	75
58221	276	318	613	53.8	55.7	74

Schlagbiegeversuch / Impact test / Essai de résilience

Lieferzustand / Condition as supplied / Etat de livraison

Probenform / Type of specimen / Type d'éprouvette	**Probenrichtung** / Specimen direction / Sens de Prélèvement	**Prüftemp.** / Test temperature / Température d'essai
[CHARPY V]	längs / longitudinal / longueur	23 [°C]

Proben-Nr. / Specimen-No. / No.d'eprouvette	**1. Prfl.** / Spec. / Eprouvette	**2. Prfl.** / Spec. / Eprouvette	**3. Prfl.** / Spec. / Eprouvette
58224	297 [J]	283 [J]	292 [J]
58223	293 [J]	286 [J]	302 [J]
58222	307 [J]	309 [J]	295 [J]
58221	288 [J]	294 [J]	307 [J]

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 06.02.02

Zeugnis-Nr. Certificate No. / No.de Certificat	Unsere Auftr.-Nr. Our order No. / No.de notre Commande	Ihre Auftr.-Nr. Your order No. / No.de votre commande	Fertigungsauftr.-Nr. Production lot-No. / Lot de fabrication No.
406671 / 7144220 / bit	123326 / 9	700599 / 100	

Interkristalline Korrosion / Intergranular corrosion / Corrosion intercristalline

ASTM A 262 PRACTICE E / DIN 50914

Die Lieferung wurde US geprüft

Die Lieferung wurde auf Identität geprüft (Spectro.)
Rißkontrolle wurde durchgeführt.
Die Lieferung wurde besichtigt und auf Maß kontrolliert

Erläuterung/ Explanations/ Explications

¤ **Erschmelzungsart** / Steelmaking process / Procédé d'élaboration : **E** = Elektrostahl / Electric-arc-furnace steel / Acier électrique
¤ **Sekundärmetallurgie** / Secondary metallurgy / Metallurgie secondaire : **VOD** = Vakuum-Sauerstoff-Entkohlungs-Verfahren / Vacuum-Oxygen-Decarburization / Vacuum-Oxygène-Décarburation

Die Lieferung wurde aus einem bevorrateten, geprüften Abnahmelos entnommen.
Material against this delivery has been taken from a stored and tested inspection lot.
La livraison a été pris d'un lot de réception stocké et éprouvé.

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellungsannahme enspricht.
We hereby certify that the material described above has been tested and complies with the terms of the order.
Nous certifions que la livraison été vérifiée et est conforme aux stipulations de l´acception de la commande.

95

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße
D-58452 Witte
Telefon: (02302)29-
Telefax: (02302)29-40 0
Postanschrift: D-58449 Witte

Datum/Date : 17.09.00

Zertifiziert nach:	ISO 9001 VDA 6. Teil 1	ADW 0 TRD 100

Abnahmeprüfzeugnis nach DIN EN 10204 3.1B
Inspection Certificate acc.to / Certificat de réception selon

Zeugnis-Nr. / Certificate No. / No.de Certificat 191531 / 7072741 / bit

Edelstahl Witten - Krefeld GmbH, D-58449 Witten
Metalsteel
Divisione SO.GE.PAR. SpA
Via Santa Sofia, 27
IT-20122 Milano

Herstellerzeichen / Supplier's Mark / Marque d'usine	wk
Prüfstempel / Inspector's stamp / Poincon de l'expert	QA

Warenempfänger
METALSTEEL
Divisione SO.GE.PAR SpA
Via per Montodine
IT-26012 Castelleone CR

Ihre Auftr.-Nr. Your order No. / No.de votre commande	**Bestelldatum** Date of order / Date du commande
700257	10.07.00
Unsere Auftr.-Nr. Our order No. / No.de notre Commande	**Unsere Material-Nr.** Our material No. / No.de notre matériel
61363 / 7	2117468
Unsere Abteilung / Our department / Notre département	**Telefon** / Telephone / Téléph
VR2	02302 / 294837

Produkt / Product / Produit

STAEBE AUS NICHTROSTENDEM STAHL
REMANIT 4401/4404, TYPE 316/316L
GEWALZT, ABGESCHRECKT, GERICHTET, GESCHAELT
DIN 17440, AD-W2, AD-W10, EN 10088-3, ASTM A 182/276/479, ASME SA 182/479, QQS 763D, NFA 35-574, NACE MR 01-75, AMS 5648, AMS 5653

Fertigungsauftr.-Nr. / Production lot-No. / Lot de fabrication No.	:
Lieferschein-Nr. / Delivery note / No. de l'avis de livraison	:
Schmelzen-Nr. / Heat No. / No.de coulée	: 26045
Stückzahl / Piece No. / Nombre des pièces	: 24
Gewicht / Weight / Masse	: 7946 [kg]
Zeichnungs-Nr. / Drawing No. / No.du dessin	:
Format / Shape / Profil	: rund / round / rond
Durchm./Breite / Diameter/width / Diamètre/largeur	: 95 [mm] + 0.540 / - 0.000 [mm]
Dicke / Thickness / Epaisseur	:
Länge / Length / Longueur	: 5700 [mm]

Stückzahl und Gewicht siehe Rechnung.
Quantity and weight see delivery bill/invoice. / Nombre des piéces et masse voir facture.

Lieferzustand / Condition as supplied / Etat de livraison : 1030 °C Wasser

Die Prüfergebnisse zu Ihrer Lieferung finden Sie auf der Rückseite bzw. den nächsten Seiten
As for test results of your delivery see overleaf. / Vouz trouverez les resultats d'essais de votre livraison aux pages suivantes.

EDELSTAHL WITTEN-KREFELD GMBH
Abnahmetechnik / Inspection department / Département de Réception

Krause
Der Werkssachverständige
Works' inspector / L'Agent Réceptionnaire de l'usine

Dieses Zeugnis wurde maschinell erstellt und ist gemäß DIN EN 10204 auch ohne Unterschrift gültig.
This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204.
Le certificat a été etabli sur système informatique et est aussi valable selon DIN EN 10204 sans signature.

8
228514
11.04.02

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witten
Telefon: (02302)29-0
Telefax: (02302)29-40 00
Postanschrift: D-58449 Witten

Datum/Date : 17.09.00

Zeugnis-Nr. Certificate No. / No.de Certificat	Unsere Auftr.-Nr. Our order No. / No.de notre Commande	Ihre Auftr.-Nr. Your order No. / No.de votre commande	Fertigungsauftr.-Nr. Production lot-No. / Lot de fabrication No.
191531 / 7072741 / bit	61363 / 7	700257	

Schmelzen-Nr. / Heat No. / No.de coulée	Erschmelzungsart / Steelmaking process / Procédé d'élaboration	Sekundärmetallurgie / Secondary metallurgy / Metallurgie secondaire
26045	E (Ugine)	VOD

Chemische Zusammensetzung / Chemical Composition / Composition chimique

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Co	Al	N	
Ist / Actual / Actuel	0.018	0.56	1.30	0.026	0.025	16.66	2.03	10.08	0.34	0.087	0.151	0.003	0.039	[%]
	B	Ti	Nb	Ca										
Ist / Actual / Actuel	0.0005	0.0007	0.033	0										[%]

Härte / Hardness / Dureté

Lieferzustand / Condition as supplied / Etat de livraison

Proben-Nr. / Specimen-No. / No.d'eprouvette	63244	
Ist / Actual / Actuel	160	[HB]

HRC MAX 22

Zugversuch / Tensile test / Essai de traction

Lieferzustand / Condition as supplied / Etat de livraison

Probenabm. / Specimen dimension / Dimension d'éprouvette	Probenrichtung / Specimen direction / Sens de Prélèvement	Prüftemp. / Test temperature / Température d'essai
Zugprobe: 12.5 mm rd	längs / longituginal / longueur	23 [°C]

Proben-Nr. / Specimen-No. / No.d'eprouvette	Rpo.2 [MPa (N/mm²)]	Rp1.o [MPa (N/mm²)]	Rm [MPa (N/mm²)]	A5 [%]	A2'' [%]	Z [%]
63247	260	305	555	60.0	60.0	77
63246	265	310	550	59.0	59.0	77
63245	270	320	555	59.0	59.0	77
63244	250	300	550	60.0	60.0	77

Schlagbiegeversuch / Impact test / Essai de résilience

Lieferzustand / Condition as supplied / Etat de livraison

Probenform / Type of specimen / Type d'éprouvette	Probenrichtung / Specimen direction / Sens de Prélèvement	Prüftemp. / Test temperature / Température d'essai
[CHARPY V]	längs / longituginal / longueur	23 [C°]

Proben-Nr. / Specimen-No. / No.d'eprouvette	1. Prfl. / Spec. / Eprouvette	2. Prfl. / Spec. / Eprouvette	3. Prfl. / Spec. / Eprouvette
63247	225 [J]	210 [J]	220 [J]
63246	222 [J]	228 [J]	226 [J]
63245	232 [J]	205 [J]	210 [J]
63244	236 [J]	212 [J]	220 [J]

Interkristalline Korrosion / Intergranular corrosion / Corrosion intercristalline

ASTM A 262 PRACTICE E / DIN 50914

Die Lieferung wurde US geprüft

Die Lieferung wurde auf Identität geprüft (Spectro.)
Rißkontrolle wurde durchgeführt.

TÜV CERT DIN EN ISO 9001 QS-9000/VDA 6.1

EDELSTAHL WITTEN-KREFELD GMBH

Auestraße 4
D-58452 Witter
Telefon: (02302)29-(
Telefax: (02302)29-40 0(
Postanschrift: D-58449 Witter

Datum/Date : 17.09.00

Zeugnis-Nr. Certificate No. / No.de Certificat	Unsere Auftr.-Nr. Our order No. / No.de notre Commande	Ihre Auftr.-Nr. Your order No. / No.de votre commande	Fertigungsauftr.-Nr. Production lot-No. / Lot de fabrication No.
191531 / 7072741 / bit	61363 / 7	700257	

Die Lieferung wurde besichtigt und auf Maß kontrolliert

Erläuterung/ Explanations/ Explications

¤ **Erschmelzungsart** / Steelmaking process / Procédé d'élaboration : **E** = Elektrostahl / Electric-arc-furnace steel / Acier électrique

¤ **Sekundärmetallurgie** / Secondary metallurgy / Metallurgie secondaire : **VOD** = Vakuum-Sauerstoff-Entkohlungs-Verfahren / Vacuum-Oxygen-Decarburization / Vacuum-Oxygène-Décarburation

Die Lieferung wurde aus einem bevorrateten, geprüften Abnahmelos entnommen.
Material against this delivery has been taken from a stored and tested inspection lot.
La livraison a été pris d'un lot de réception stocké et éprouvé.

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellungsannahme enspricht.
We hereby certify that the material described above has been tested and complies with the terms of the order.
Nous certifions que la livraison été vérifiée et est conforme aux stipulations de l'acception de la commande.

SCAM
S.R.L.
SOCIETA' COMMERCIO ACCIAI METALLI
Via Bernini, 14 - PARMA - Tel. 293132
Cod. Fisc. e P.IVA 00166610345

4 N. Nr No 82350 | 11 N. de commande usine-Werksbestellnummer-Works order number: FUGE FUG3 1/1 7KT41000

3

CERTIFICATO COLLAUDO DI ACCETTAZIONE B
CERTIFICAT DE RECEPTION 3.1.B
INSPECTION CERTIFICATE B

EN 10204 / 3.1.B

Produit / Erzeugnisform / Product: BARRA TONDA 4307 UGIMA LAMINATA PELATA

Client et/ou destinataire - Besteller und/oder Empfaenger - Purchaser and/or Consignee (9): 011069133 01

N. de commande client - Kundebestellnummer - Purchaser order number

Nuance et spécifications techniques - Stahlsorte und Pruefbedingungen - Quality and Specifications

UGIMA 4307 4307I EN 1.4307
EUROSTORE REV.9 DU 05/97

Etat de livraison - Lieferzustand - As delivered (1): SOLUBILIZZATO (13)

Traitement de Référence - Probestreifenbehandlung - Treatment of test samples (1)

Identification du produit / Erzeugnis Benennung-Product Identification: N. de cde usine Werksbestellnummer Works order number (15)	N. de poste Past Nr Item No (17)	N. de Coulée Schmelz Nr Heat No (16)	Nombre Stueckzahl Pieces Nbr (18)	Profil Profil Shape (19)	Dimension Ausmessung Dimension (20)	Longueur Laenge Length (21)	Masse Gewicht Weight (22)
7KT41	000	026073	2	TONDO	125,000		1020 KG

Traction - Zugversuch - Tensile test

N. de Prélèvement Probenummer Test N.	Demandé Vorschrift Required (3)	Sens Richtung Direction (24)	Température d'essai Pruefteemperatur Test Temperature (25)	Limite d'Elasticité Streckgrenze Yield Strength 0,2 % (26 A)	Limite d'Elasticité Streckgrenze Yield Strength 1 % (26 B)	Résistance à la traction Zugfestigkeit Tensile strength (27)	Allongement Dehnung Elongation (28)	Striction Einschnuerung Red of Area (29)	Dureté Haerte Hardness (4)
39 B	Min	L	RT	MPA 205	MPA 225	MPA 515	% 45	% 50	
	Max					650			
	(4)			295	335	600	56	77	
	(5)								

Résilience - Kerbschlagzaehigkeit - Notch Toughness

Type Form Type (31)	Sens Richtung Direction (32)	Température d'essai Pruefteemperatur Test Temperature (33)	Valeurs Individuelles Einzelwerte Individual Values (35)	Moyenne Mittelwerte Average (36)	Dureté Haerte Hardness (5) (37)
		RT			

N. de Prélèvement Probenummer Test N. (39 A)	Demandé Vorschrift Required (40)	C (42)	SI (43)	MN (44)	NI (45)	CR (46)	N (47)	S (48)	P (49)
	Min				8,00	18,00		0,015	
	Max	0,030	1,00	2,00	10,00	19,00	0,100	0,030	0,045
N. de Coulée Schmelz Nr Heat N. 026073	Analyse Produit-Stueck-analyse-Check Analysis	0,018	0,63	1,09	9,05	18,14	0,057	0,023	0,022

Mode d'élaboration Erschmelzungsart Melting process (38)	Demandé Vorschrift Required (51)	(52)	(53)	(54)	(55)
Electrique Elektrisch Electric	Min				
	Max				

CERTIFICATO N. 202
CLIENTE FELTENATI & C. SNC
D.D.T. N. 5666 DEL 08/05/02 PZ. 120
COPIA CONFORME ALL'ORIGINALE IN NOSTRO POSSESSO
ASSICURAZIONE QUANTA'

EN10088-3 ,304L+304 ,4307+4301
RESILIENCE : VALEUR MINIMALE GARANTIE ISO-V = 160 J (EN LONG)
ASTM A182 A276 A479 GRADES 304L & 304 / BS 970 PART3 304S11 304S12 304S31
NF EN 10088-3 DIN EN 10088-3 X2CRNI18-9 X5CRNI18-10
VALORE MINIMO GARANTITO DELLA RESILIENZA ISOV - 160 J (LONG.)
RESISTENTE ALLA CORROSIONE INTERCRISTALLINA SECONDO EURONORM 114
TOUGHNESS: GUARANTEED MINIMAL IMPACT ISO-V VALUE = 160 J (LENGTH)
INTERCRYSTAL. CORROSION RESISTANT ACC. TO EURONORM 114 / ANTIMIXING TESTED

BARRA TONDA 4307 UGIMA LAMINATA PELATA
SOLUBILIZZATA TOL. K13

REGISTRATO
13 FEB. 2001
308/01

(3) L = Long / Laenge - Long / T = Travers / Quer-Transverse (58)

(1) TE = Trempé à l'eau - Wasserhaerten - Waterquench; TH = Trempé à l'huile - Oilharten - Oil Quench; A = Hypertrempé - Loesungsgeglueht - Solution annealed; R = Revenu - Anlassen - Tempered; RT = Recuit - Geglueht - Annealed; TRM = Recuit maxi - Weichgeglueht - Maxi annealed (7)

(4) A l'état de référence / Zum Bezug Zustand / At reference condition (60 A)

(5) A l'état de livraison / In Lieferzustand / In state of delivery (60 B)

Contrôles de marquage, d'aspect et de dimensions: satisfaisants / Bezeichnung, Beschaffung und Ausmessung: ohne Beanstandung / Marking, inspection and measurement: without objection (62)

Nous certifions que les produits énumérés ci-dessus sont conformes aux prescriptions de la commande / Wir bestätigen hiermit dass die obengenannten Erzeugnisse den Bestellungsvorschriften entsprechen / We certify hereby that the above mentioned products are consistent with the order prescriptions (65)

Usine, le 16-11-00
L'Agent Réceptionnaire de l'usine / Der Werksachverstaendige / The Work Inspector
C. Bioteau (67)

D 3161 D130

Acciaierie Valbruna s.p.a.

36100 VICENZA (Italia) – Viale della Scienza, 25 z.i.

ATTESTATO DI CONTROLLO - WERKSZEUGNIS
TEST REPORT - RELEVE DE CONTROLE
EN 10204, 2.2

Avviso spedizione nr. / Lieferanzeige/Packing list/B.L.: 6810 [2001/ 16525-V]

Certificato nr. / Prüfung/Test/Essai: 2117/2001-PF

Cliente: / Besteller/ Purchaser/ Client: Pollicardi R.C.

Conferma ordine nr. / Werks/OurOrder/Ref nr.: 01 K47894

Ordine nr. / Bestell/Your Order/Commande: MATER. X CONF. 01O02072 01 01

Marchio di fabbrica / Zeichen des Lieferwerkes / Trade mark / Sigle de l'usine productrice

Deposito: / Lager/ Depot/ Warehouse: ACC. VALBRUNA SPA- MAG. PARMA

Produttore: / Hersteller/Manifactured/Usine productrice: ACCIAIERIE VALBRUNA s.p.a.

Tipo di elaborazione: / Erschmelzungsart/Melting process/Mode d'elaboration: E + AOD

Punzone del collaudatore: / Stempel des Werkssachverständigen / Inspector's stamp/Poinçon de l'essayeur

Oggetto prove: / Prüfgegenstand/Item inspected/Finissage: PELATO SOLUB.

Specifiche: / Anforderungen / Requirements Exigences: AISI,,316/316L,A ASTM A276,2000A,S31600/03,A

Qualità: / Werkstoff/Quality//Nuance: T.316/316L

Marca : / Markenbezeichnung/Brand/Nuance: MVAPML [MAXIVAL]

Punzonatura: / Kennzeichnung/Marking/Marquage

Pos. nr. / Pos.nr. / Item nr.. / Nr. de poste	Oggetto / Gegenstand / Product description / Description du produit	Dimensioni [mm] / Abmessungen / Dimension / Dimension	Lunghezza [mm] / Länge / Length / Longueur	Colata / Schmelze / Heat / Coulée	Pezzi / Stückzahl / Pieces / Pieces	Peso / Gewicht / Weight / Poids	Lotto nr. / Losnr. / Lot nr. / Lot nr.
1	TONDO	100.00		408664		126	
					[2]	[685]	

Sono state soddisfatte le condizioni richieste
Die gestellten Anforderungen sind lt. Anlage erfüllt
The material has been furnished in accordance with the requirements
Le materiel à eté trouvé conforme aux exigences

TEST	Provetta/Probestab Specimen/Eprouvette Largh. diam Spess. Breite Diam. Dicke Width diam. Thickness Larg. diam. Epais mm	Posizione saggio 1) Probelage Location/Emplacement	Snervamento Grenze Yield stress Limite elastique Rp 0.2% N/mm2	Snervamento Grenze Yield stress Limite elastique	Resistenza Zugfestigkeit Tensile strength Resistance à la traction Rm N/mm2	Allungamento Bruchdehnung Elongation Allongement %	E %	Strizione Einschnürung Reduction of area Striction RA %	Resilienza Kerbschlagarbeit Impact value Resilience	
Valori richiesti Anforderungen/Required values Valeurs démandées		min max	205		515		40	50		
A	12.5	L	242		558		68	79		

Colata/heat Schmelze/ coulée: 408664

Analisi chimica
Chemische Zusammensetzung/Chemical analysis/Analyse chimique

1)L=longitudinale/längs, Q=trasversale/quer, T= tangenziale/tangential

	C	Si	Mn	Cr	Ni	Mo	P	S	N
min				16.00	10.00	2.00			
max	0.030	1.00	2.00	18.00	14.00	3.00	0.045	0.030	0.10
	0.025	0.57	1.53	17.00	10.45	2.07	0.029	0.025	0.06

Abgeschreckt von / Annealed from
Solubilizzato a ....°C
Hypertrempé à

Allegati: / Anlagen / Enclosure / P.L.

Acciaierie Valbruna s.p.a.
COPIA CONFORME ALL'ORIGINALE

Vicenza, 30/10/2001

M. RIZZOTTO
Il collaudatore di stabilimento
der Werkssachverständige/Works inspector/L'agent d'usine

Mod.lart1lvi.ps CER-36 / P

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2672

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
AUSALDO S.P.A	N° ASG\840 DEL 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
TUBO LINEE M1-M2 LHCMB S0100	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.

- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.

- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 1

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 1

DATA / DATE / DATE / DATUM 3/10/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Zoglietti Yuri

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2679

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° 459\840 2/08/2002
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG Manicotto Flessibile LHCDECMA0040	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 3/10/2002

IL CONTROLLORE / LE CONTROLLEUR
THE CONTROLLER / DER PRÜFER

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2673

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
AUSALDO S.P.A	N° ASG\840 DEL 2\08\02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG: COMP. DI ESTREMITA x LINEA N LHCMB 50245	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. / PROCEDURE RIAL U.H.V. / RIAL U.H.V. PROCEDURE / RIAL U.H.V. VERFAHREN — N. SLT 1

ALTRI TRATTAMENTI CLU3
AUTRE PROCEDURE
OTHER PROCEDURE
ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA / ENREGISTREMENT DE L'ESSAI / TEST RECORDING / AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 1

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 1

DATA / DATE / DATE / DATUM 3\10\2002

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Baglietti Piero

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2677

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° ASG\840 DEL 2\08\2002
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG CHIUSURA LINEA M-3 LHCMB S0180	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 1

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 1

DATA / DATE / DATE / DATUM 31\10\2002

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Zaffetti Luca

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2676

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° ASG\840 DEL 2\08\2002
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Chiusura Linea M1 LHCMB S0179	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATE TYPE ASH NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.

- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.

- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 1

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 1

DATA / DATE / DATE / DATUM 31\10\2002

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Esposito Luca

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2675

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° ASG\840 DEL 2\08\2002
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Tubo di chiusura LHCMB S0184	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 1

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 1

DATA / DATE / DATE / DATUM 3\10\2002

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Zoplatt Yuri

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2678

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° ASG\840 DEL 2\08\2002
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Flangia di Chiusura LHCMBS0836	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLV 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☑ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: .....

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: .....

DATA / DATE / DATE / DATUM 3\10\2002

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Gaglietti Yuri

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2693

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
AUSALdo S.P.A	N° ASG\840 02\08\02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG COMP. DI ESTREMITA' LINEA U LHCMB S0245	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Egletti Piero

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2694

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ansaldo S.P.A	N° ASG/840 02\08\02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Assemblaggio Tubo LHCMB	
S0094 N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLU 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm³/sec.

☐ B 3×10^{-8} atm. cm³/sec.

- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm³/sec.

- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR Egeletti Pieri
THE CONTROLLER / DER PRÜFER

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2695

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ausaldo S.P.A	N° A5G/840 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Tubo LINEA M1 - M2 LHCMB S0100	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 8

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 8

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Baldelli Luca

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2696

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ausaldo S.P.A	N° ASG/840 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG: Tubo di Chiusura LHCMB 30184	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT 1	ALTRI TRATTAMENTI CLN 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Gabriotti Piero

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2697

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ausaldo SPA	N° ASG/840 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
FLANGIA di Chiusura LHCMB S0836	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V.
PROCEDURE RIAL U.H.V.
RIAL U.H.V. PROCEDURE
RIAL U.H.V. VERFAHREN
N. SLT 1

ALTRI TRATTAMENTI CLN 3
AUTRE PROCEDURE
OTHER PROCEDURE
ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 52

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Scafetti Luca

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2698

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
Ausaldo S.P.A	N° ASG/840 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
Chiusura Linea M1 LHCMB 50179	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V.
PROCEDURE RIAL U.H.V.
RIAL U.H.V. PROCEDURE
RIAL U.H.V. VERFAHREN

N. SLT1

ALTRI TRATTAMENTI CLV3
AUTRE PROCEDURE
OTHER PROCEDURE
ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. $cm^3/sec.$

☐ B 3×10^{-8} atm. $cm^3/sec.$

- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. $cm^3/sec.$

- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: 2

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: 2

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Esplati Yuri

RIAL VACUUM S.p.A.

Via Tito ed Ettore Manzini, 7/A - Località Scarzara - 43040 PARMA - Italia Tel. 0521.949311 - Fax 0521.949300

CERTIFICATO DI TENUTA A ELIO
CERTIFICAT D'ETANCHEITE' A L'HELIUM
HELIUM LEAK TEST CERTIFICATE
BESCHEINIGUNG ÜBER DICHTIGKEITSPRÜFUNG

2700

CLIENTE / CLIENT / CUSTOMER / KUNDE	ORD. CLIENTE / CDE CLIENT / CUST. ORDER / KUNDENBEST.
ANSALDO S.P.A	N° ASG\840 02/08/02
DESCRIZIONE / DESIGNATION / DESCRIPTION / BEZEICHNUNG	RIF. RIAL / REF. RIAL / RIAL CODE / RIAL REFERENZ
CHIUSURA LINEA M 3 LHCMB SO1808	
N° DI SERIE / N° D'ORDRE / SERIAL NR / SERIE NUMMER	RIF. CLIENTE / REF. CLIENT / CUSTOMER REF. / KUNDENREF.

☐ TRATTAMENTO RIAL U.H.V. PROCEDURE RIAL U.H.V. RIAL U.H.V. PROCEDURE RIAL U.H.V. VERFAHREN	N. SLT1	ALTRI TRATTAMENTI CLU 3 AUTRE PROCEDURE OTHER PROCEDURE ANDERE VERFAHREN

— CERCAFUGHE / DETECTEUR DE FUITE / LEAK DETECTOR / DEEKDETEKTOR: ALCATEL TYPE ASM NR. 51

— CLASSE DI PROVA / CLASSE D'ESSAI / TEST CLASS / PRÜFKLASSE

☐ A 3×10^{-8} atm. cm^3/sec.

☐ B 3×10^{-8} atm. cm^3/sec.
- CON DECAPPAGGIO E TRATTAMENTO BIANCO
- AVEC DECAPAGE ET TRAITEMENT BLANC
- WITH PICKLING AND NUCLEAR CLEANLINESS
- MIT BEIZEN BZW UHV-REINIGUNG

☒ C 1×10^{-9} atm. cm^3/sec.
- CON RISCALDAMENTO A 130° C
- AVEC ETOUVAGE A 130° C
- WITH BACKING AT 130° C
- AUFHEIZUNG BIS 130° C

☐ REGISTRAZIONE DELLA PROVA
ENREGISTREMENT DE L'ESSAI
TEST RECORDING
AUTOM. PRÜFEINTRAGUNG

COMMENTI / COMMENTAIRES / COMMENTS / BEMERKUNG

RISULTATI DELLA PROVA / RESULTATS DE L'ESSAI / TEST RESULTS / VERSUCHSERGEBNISSE:

N. DI PEZZI PROVATI / N. DE PIECES TESTEES / N. OF PARTS TESTED / GEPRÜFTE TEILANZAHL: .....

N. DI PEZZI ACCETTATI / N. DE PIECES ACCEPTES / N. OF RECEIPT PARTS / ANGENOMME TEILANZAHL: .....

DATA / DATE / DATE / DATUM 7/11/02

IL CONTROLLORE / LE CONTROLLEUR / THE CONTROLLER / DER PRÜFER Eglotti Yuri

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.

SISTEMA QUALITA'
QUALITY SYSTEM

ATC N° 1032/001/2001

COMM. *Job* 1032 / 0000

DATA *Date* 26/11/2001

ATTESTATO DI CONFORMITA'
Certificate of compliance

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM

OGGETTO *Subject*	DISEGNO RIF. *Ref. Drw*	FOGLIO *Sheet*	DI *Of*
PIASTRE DI TESTA	VEDI SOTTO	1	1

RIFERIMENTO ORDINE *Order reference* POS. *Item*	DISEGNO *Drawing*	DENOMINAZIONE *Item description*	Quantità *Quantity*	Documentazione rilasciata *Delivered documentation*
3	683RM08455 REV.F	PIASTRA DI TESTA L.C.	7	
5	683RM08456 REV.F	PIASTRA DI TESTA L.O.C.	7	

SI CERTIFICA CHE I PARTICOLARI SOPRACITATI SONO STATI COSTRUITI IN CONFORMITA' AI DISEGNI E ALLE SPECIFICHE RICHIAMATE IN ORDINE.
WE CERTIFY THAT THE ABOVEMENTIONED PARTS HAVE BEEN BUILD AND TESTED IN CONFORMITY WITH SPECIFICATIONS AND DRAWING AS IN ORDER

Note
Remarks

Operatore *Operator*	Enti collaudatori *Inspect. officials*	Ispettore cliente *Customer inspect.*	Capo collaudo *Inspect. Chief*
			Zambetti e Lumina S.p.A. Walter Spalletti Level 2 PT-UT-MT-PT-VT UNI EN 473/SNT-TC-1A

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.	SISTEMA QUALITA' *QUALITY SYSTEM*	ATC N° 1032/001/2002
	ATTESTATO DI CONFORMITA' *Certificate of compliance*	COMM. *Job* 1032 / 0000
		DATA *Date* 07/03/2002

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM
OGGETTO *Subject*	**DISEGNO RIF.** *Ref. Drw*		**FOGLIO** *Sheet* 1 **DI** *Of* 1
PIASTRE DI TESTA	VEDI SOTTO		

RIFERIMENTO ORDINE *Order reference* POS. *Item*	DISEGNO *Drawing*	DENOMINAZIONE *Item description*	Quantità *Quantity*	Documentazione rilasciata *Delivered documentation*
3	683RM08455 REV.F	PIASTRA DI TESTA L.C.	4	
5	683RM08456 REV.F	PIASTRA DI TESTA L.O.C.	4	

SI CERTIFICA CHE I PARTICOLARI SOPRACITATI SONO STATI COSTRUITI IN CONFORMITA' AI DISEGNI E ALLE SPECIFICHE RICHIAMATE IN ORDINE.
WE CERTIFY THAT THE ABOVEMENTIONED PARTS HAVE BEEN BUILD AND TESTED IN CONFORMITY WITH SPECIFICATIONS AND DRAWING AS IN ORDER

Note
Remarks

Operatore *Operator*	**Enti collaudatori** *Inspect. officials*	**Ispettore cliente** *Customer Inspect.*	Zambetti e Lumina S.p.A. *Inspect. Dept. Head* Walter Spolaore Level 2 RT-UT-MT-PT-VT UNI EN 473/ANT-TC-1A

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.	SISTEMA QUALITA' *QUALITY SYSTEM*	ATC N° 1032/003/2002
	ATTESTATO DI CONFORMITA' *Certificate of compliance*	COMM. *Job* 1032 / 0000
		DATA *Date* 02/07/2002

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM
OGGETTO *Subject*	DISEGNO RIF. *Ref. Drw*		FOGLIO *Sheet* 1 DI *Of* 1
PIASTRE DI TESTA	VEDI SOTTO		

RIFERIMENTO ORDINE *Order reference* POS. *Item*	DISEGNO *Drawing*	DENOMINAZIONE *Item description*	Quantità *Quantity*	Documentazione rilasciata *Delivered documentation*
4	683RM08455 REV.F	PIASTRA DI TESTA L.C.	13	
6	683RM08456 REV.F	PIASTRA DI TESTA L.O.C.	13	

SI CERTIFICA CHE I PARTICOLARI SOPRACITATI SONO STATI COSTRUITI IN CONFORMITA' AI DISEGNI E ALLE SPECIFICHE RICHIAMATE IN ORDINE.
WE CERTIFY THAT THE ABOVEMENTIONED PARTS HAVE BEEN BUILD AND TESTED IN CONFORMITY WITH SPECIFICATIONS AND DRAWING AS IN ORDER

Note
Remarks

Operatore *Operator*	Enti collaudatori *Inspect. officials*	Ispettore cliente *Customer inspect.*	Capo collaudo *Inspect. Dept. manager* Zambetti e Lumina S.p.A. Walter Spelgatti Livello 2 UT MT PT VT UNI EN 473/SNT-TC-1A

MODULO - MD002 Rev.00

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.	SISTEMA QUALITA' *QUALITY SYSTEM*	ATC N° 1032/002/2002
	ATTESTATO DI CONFORMITA' *Certificate of compliance*	COMM. *Job* 1032 / 0000
		DATA *Date* 02/07/2002

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM
OGGETTO *Subject*	**DISEGNO RIF.** *Ref. Drw*		**FOGLIO** *Sheet* 1 **DI** *Of* 1
PIASTRE DI TESTA	VEDI SOTTO		

RIFERIMENTO ORDINE *Order reference* POS. *Item*	DISEGNO *Drawing*	DENOMINAZIONE *Item description*	Quantità *Quantity*	Documentazione rilasciata *Delivered documentation*
3	683RM08455 REV.F	PIASTRA DI TESTA L.C.	2	
5	683RM08456 REV.F	PIASTRA DI TESTA L.O.C.	2	

SI CERTIFICA CHE I PARTICOLARI SOPRACITATI SONO STATI COSTRUITI IN CONFORMITA' AI DISEGNI E ALLE SPECIFICHE RICHIAMATE IN ORDINE.
WE CERTIFY THAT THE ABOVEMENTIONED PARTS HAVE BEEN BUILD AND TESTED IN CONFORMITY WITH SPECIFICATIONS AND DRAWING AS IN ORDER

Note
Remarks

Operatore *Operator*	**Enti collaudatori** *Inspect. officials*	**Ispettore cliente** *Customer inspect.*	**Capo collaudo** *Inspect. chief manager*
			Zambetti e Lumina S.p.A. Walter Spelgatti Livello 2° - UNI EN 473/SNT-TC-1A

MODULO - MD002 Rev.00

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.	SISTEMA QUALITA' *QUALITY SYSTEM*	RCD N° 19/2001
	RAPPORTO DI CONTROLLO DIMENSIONALE *Dimensional test report*	COMM. *Job* 1032 / 0010 DATA *Date* 27/07/2001

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*	
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM	
OGGETTO *Subject*	**DISEGNO RIF.** *Ref. Drw*		**QUANTITA'** *Quantity*	**FOGLIO** *Sheet* **DI** *of*
PIASTRA DI TESTA L.C.	683RM08455 REV.E		1	1 1

RIFERIMENTO ORDINE *Order reference*		DENOMINAZIONE *Item description*	Quota *Dimension* Prescritta *Prescrib.*		Rilevata *Dimensional result*			
POS. *Item*	DISEGNO *Drawing*		Nominale *Nominal*	Tolleranza *Tolerance*	Conforme *According to*	N°	Non confor. *Not acc. to*	N°
1	683RM08455 REV.E	PIASTRA DI TESTA L.C.	R 274,50	+0 / -0,10	- 0,05	/	/	/
			237,50	+0 / -0,50	- 0,10	/	/	/
			148,00	0 / +0,50	+ 0,15	/	/	/
			97,26	± 0,10	± 0,05	/	/	/
			80,00	0 / +0,50	+ 0,50	/	/	/
			70,00	0 / +0,50	+ 0,50	/	/	/
			52,00	± 0,50	+ 0,50	/	/	/
			50,00	± 0,20	-0,04 / -0,07	/	/	/

Note
Remarks

Operatore *Operator*	Enti collaudatori *Inspect. officials*	Ispettore cliente *Customer inspect.*	Capo collaudo *Inspect. Dept. manager* Zambetti e Lumina S.p.A. Walter Spelgatti Level 2 BT-UT-MT-PT-VT UNI EN 473/SNT-TC-1A

MODULO - MD010 Rev.00

ZAMBETTI-LUMINA SPA

Zambetti e Lumina S.p.a.	SISTEMA QUALITA' *QUALITY SYSTEM*	RCD N° 20/2001
	RAPPORTO DI CONTROLLO DIMENSIONALE *Dimensional test report*	COMM. *Job* 1032 / 0020
		DATA *Date* 27/07/2001

CLIENTE *Customer*	ORDINE *Order*	DEL *Of*	COMM. CLIENTE *Customer's job*	
ANSALDO SUPERCOND. S.p.A.	157	14/05/2001	F10209EM	
OGGETTO *Subject*	**DISEGNO RIF.** *Ref. Drw*		**QUANTITA'** *Quantity*	**FOGLIO DI** *Sheet of*
PIASTRA DI TESTA L.O.C.	683RM08456 REV.E		1	1 1

RIFERIMENTO ORDINE *Order reference*		DENOMINAZIONE *Item description*	Quota *Dimension*					
			Prescritta	*Prescrib.*	Rilevata	*Dimensional result*		
POS. *Item*	DISEGNO *Drawing*		Nominale *Nominal*	Tolleranza *Tolerance*	Conforme *According to*	N°	Non confor. *Not acc. to*	N°
2	683RM08456 REV.E	PIASTRA DI TESTA L.C. LOC	R 274,50	+0 / -0,10	- 0,02	/	/	/
			232,50	+0 / -0,50	- 0,10	/	/	/
			248,00	-0,1/-0,5	- 0,15	/	/	/
			97,26	± 0,10	± 0,05	/	/	/
			95,00	± 0,50	± 0,10	/	/	/
			90,00	0 / +0,50	± 0,12	/	/	/
			52,00	± 0,50	0	/	/	/
			47,00	± 0,20	- 0,20	/	/	/
			50,00	± 0,20	-0,05 / -0,10	/	/	/

Note
Remarks

Operatore *Operator*	Enti collaudatori *Inspect. officials*	Ispettore cliente *Customer inspect.*	Capo collaudo *Inspect. Dept. Manager*
			Zambetti e Lumina S.p.A. Walter Sobiati Level 2 RT-UTVT-PTVT UNI EN 473/SNT-TC-1A

MODULO - MD010 Rev.00

CERTIFICATE - ZEUGNIS - CERTIFICATO Page 1(2)
EN 10 204-3.1.B ZAMBETTI-LUMINA SPA Seite

AvestaPolarit STAINLESS

Date - Datum	Load - Ladung - Charge No	Cert No - Zeugnis Nr
010905	3637	1090430.R00

Your order - Ihre Bestellung - Votre commande	Avesta Order - Auftrag - Ordre Pack - Kolli - Colis No
1357	103421 0

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences
EN 10088-2:1995
ASTM A240-01
+0/-2.0 mm

Dest.
To buyer by mail

Product - Erzeugnisform - Produit
Stainless steel plate, hot rolled
Solution annealed, pickled /:1D/No. 1 Finish

Grade - Werkstoff - Nuance
17-11-2LN
1.4406/Type 316LN

C625

Brand-Mark - Herstellerzeichen - Signe du fabricant	Inspection stamp - Abnahme - Estampille de réception	Melting process - Erschmelzungsart - Procédé de fusion
W	DJ 2	E+CLU

Marking - Kennzeichnung - Marquage
Plate No, Dimension, Heat No, Lot No, Incl. *

Extent of delivery - Lieferumfang - Etendue de livraison

Item - Pos - Pos	Quantity - Anzahl - Nombre	kg	Dimension - Abmessung - mm	Heat No - Schmelze-Nr - Coulée	Lot No - Los-N - Lot No
1	1		60 * 1600 * 5500	86303A	96165

Plate No 4135 1604
Blech Nr
Tôle No

Chemical composition - Chemische Zusammensetzung - Composition chimique %
Heat - Schmelze - Coulée No

	C	Si	Mn	P	S	Cr	Ni	Mo	N
Min	0.000	0.0	0.0	0.000	0.000	16.50	10.00	2.00	0.12
Max	0.030	0.8	2.0	0.045	0.015	18.00	12.00	2.50	0.16
86303A	0.025	0.7	1.1	0.028	0.001	17.52	11.13	2.28	0.13

Test results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa)

Direc. T = Transverse L = Longitudinal | Top/Bot F = Front B = Back | Form P = Flat C = Round | Location 1 = Center 2 = Close to Surface 3 = Standard 4 = At 1/4 of thickness

Mechanical Properties
Tensile testing EN 10 002/Hardness Rockwell B

Plate-No	Direc.	Top/Bot	Location	Form	Temp. C	Rp 0,2 N/mm2	Rp 1,0 N/mm2	Rm N/mm2	A5 %	A50 %	HRB
Min						280	320	580	40	40	
Max								780			95
1603	T	F	4	C	20	306	344	617	52	57	80

N°.....
ZAMBETTI e LUMINA S.p.A.
CONTROLLO QUALITA'

The results comply with the requirements of the order.

AvestaPolarit AB (publ)
HOT ROLLED PLATE
SE-693 81 Degerfors
Sweden
TELEFON / TELEPHONE
Nat 0586 - 470 00
Int +046 (0)586 470 00
TELEFAX
Nat 0586 - 470 16
Int +046 (0)586 470 16
Org nr/Reg. No.: 556001-8748 Moms nr/V.A.T. No.: SE556001874801
Säte/Registered office Stockholm Sweden

Certificate No FM 09184

Quality Inspector

CERTIFICATE - ZEUGNIS ZAMBETTI-LUMINA SPA Page 2(2) Seite

EN 10 204-3.1.B

AvestaPolarit STAINLESS

Date - Datum	Load - Ladung / Charge No.	Cert.No. - Zeugnis Nr.
010905	3637	1090430.R00

Other Information

Heat treated at 1100 C and Quenched in water.
Plate divided into multipel of:1
Dimensional control, visual inspection and grade check :Approved

Zambetti & Lumina

N.°	ACM-105/01
COMM. JOB	1032
DATA DATE	15-11-01
CLIENTE CUSTOMER	ANSALDO SUP.
ORDINE ORDER	157 Pos. 3÷6
DISEGNO DRAWING	683 RM 08455
	683 RM 08456
CONTROLLATO CONTROLLED	

N°.....
ZAMBETTI & LUMINA S.p.A.
CONTROLLO QUALITA'

AvestaPolarit AB (publ)
HOT ROLLED PLATE
SE-693 81 Degerfors
Sweden
TELEFON / TELEPHONE Nat 0586 - 470 00 Int +046 (0)586 470 00
TELEFAX Nat 0586 - 470 16 Int +046 (0)586 470 16
Org nr/Reg. No.: 556001-8748 Moms nr/V.A.T. No.: SE556001874801
Säte/Registered office Stockholm Sweden

FM 09184

Quality Inspector

CERTIFICATE / ZEUGNIS / CERTIFICAT / Seite

EN 10.204-3.1.B ZAMBETTI-LUMINA SPA

AvestaPolarit STAINLESS

Date - Datum	Load - Ladung - Charge No	Cert.No - Zeugnis Nr
010905	3637	1090431.R00

Your order - Ihre Bestellung - Votre commande	Avesta Order - Auftrag - Ordre	Pack - Kolli - Colis No
1357	103421	0

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

EN 10088-2:1995
ASTM A240-01
+0/-2.0 mm

Dest.

To buyer by mail

Product - Erzeugnisform - Produit

Stainless steel plate, hot rolled
Solution annealed, pickled /:1D/No. 1 Finish

Grade - Werkstoff - Nuance

17-11-2LN
1.4406/Type 316LN

C696

Brand-Mark - Herstellerzeichen - Signe du Producteur	Inspectors stamp - Abnahme - Stempel - Estampille de l'expert	Melting process - Erschmelzungsart - Procédé de fusion
W	DJ 2	E+CLU

Marking - Kennzeichnung - Marquage

Plate No, Dimension, Heat No, Lot No, Incl. *

Extent of delivery - Lieferumfang - Etendue de livraison Item Pos Pos Anzahl Nombre	kg	Dimension - Abmessung mm	Heat No Schmelze-Nr Coulée	Lot No Los Nr Lot No
2 1		60 * 1600 * 5220	86303A	96165

Plate No 4135 1603
Blech Nr
Tôle No

Chemical composition - Chemische Zusammensetzung - Composition chimique %
Heat - Schmelze - Coulée No

	C	Si	Mn	P	S	Cr	Ni	Mo	N
Min	0.000	0.0	0.0	0.000	0.000	16.50	10.00	2.00	0.12
Max	0.030	0.8	2.0	0.045	0.015	18.00	12.00	2.50	0.16
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Mechanical Properties

Tensile testing EN 10 002/Hardness Rockwell B

Plate-No	Direc.	Top/Bot	Location	Form	Temp. C	Rp 0,2 N/mm2	Rp 1,0 N/mm2	Rm N/mm2	A5 %	A50 %	HRB
Min						280	320	580	40	40	
Max								780			95
1603	T	B	4	C	20	306	344	617	52	57	80

N°.....

ZAMBETTI e LUMINA S.p.A.
CONTROLLO QUALITA'

The results comply with the requirements of the order.

AvestaPolarit AB (publ)
HOT ROLLED PLATE
SE-693 81 Degerfors
Sweden
TELEFON / TELEPHONE Nat 0586 - 470 00 Int +046 (0)586 470 00
TELEFAX Nat 0586 - 470 16 Int +046 (0)586 470 16
Org nr/Reg. No.: 556001-8748 Moms nr/V.A.T. No.: SE556001874801
Säte/Registered office Stockholm Sweden

FM 09184

Quality Inspector

CERTIFICATE ZEUGNIS CERTIFICAT ZAMBETTI-LUMINA SPA Page 2(2) Seite

EN 10 204-3.1.B

AvestaPolarit STAINLESS

Date Datum	Load Ladung	Charge No Ch.	Cert. No. Zeugnis Nr.
010905	3637	1090431.R00	

Other Information

Heat treated at 1100 C and Quenched in water.
Plate divided into multipel of:1
Dimensional control, visual inspection and grade check :Approved

Zambetti & Lumina

N.° ACM-106/01
COMM. JOB 1032
DATA DATE 15-11-01
CLIENTE CUSTOMER ANSALDO SUP.
ORDINE ORDER 157 Pos. 3÷6
DISEGNO DRAWING 683RM08455
683RM08456
CONTROLLATO CONTROLLED

N°.....
ZAMBETTI e LUMINA S.p.A.
CONTROLLO QUALITA'

AvestaPolarit AB (publ)
HOT ROLLED PLATE
SE-693 81 Degerfors
Sweden

TELEFON/TELEPHONE
Nat 0586 - 470 00
Int +046 (0)586 470 00

TELEFAX
Nat 0586 - 470 16
Int +046 (0)586 470 16

Org nr/Reg. No.: 556001-8748 Moms nr/V.A.T. No.: SE556001874801
Säte/Registered office Stockholm, Sweden

FM 09184

Quality Inspector

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
CYLINDRICAL FILLING PIECE	HCMB__A170	-		Batch N° NOV.2001
		-		
		-		
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor:*** ANSALDO ENERGIA S.pa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Cristiano Lanza — ***Tel.*** 00 41 22 767 36 47; ***E-mail.*** Cristiano.Lanza@cern.ch

9. ***Reference specification:*** LHC-MMS/2001-229/CL

10. ***Reference drawings:*** LHCMB__A0170

11. ***Part manufactured by:*** TOP GLASS S.p.a

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** 150 (30 X 5) pieces for 30 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
14 – 01 – 2002	Cristiano Lanza	Cristiano Lanza

TOP GLASS

DICHIARAZIONE DI CONFORMITÀ n° 2675/2001

Noi TOP GLASS S.p.A.

Via Bergamo n° 15, 20096 Pioltello (MI)

dichiariamo sotto la nostra esclusiva responsabilità che il prodotto :

TIPO : TONDO Ø 55,4 mm NATURALE EPOXY

Lunghezza 14703 mm (2935 ± 5 mm)

CLIENTE : CERN – ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE

VOSTRO ORDINE : n° CA 1185867 del 12/09/01

Documento di trasporto n° 2675 del 10/12/01

al quale questa dichiarazione si riferisce è conforme alla seguente norma o ad altri documenti normativi : LHCMB A00170

Pioltello li 14/12/01

x Responsabile Assicurazione Qualità

Ing. Maurizio Ondei

Gaulusa Farina

SINCERT Certificato n° 034 Norma ISO 9002

SQP CISQ IQNet

TOP GLASS

LABORATORIO TOP GLASS

CLIENTE: CERN

DATA: **28/11/01**

lotto di produzione n° **NOV. 2001**

TIPOLOGIA : **TONDO Ø 55,4 mm epossidico naturale**

DATA INIZIO PRODUZIONE : **09/11/01**

DATA FINE PRODUZIONE : **28/11/01**

verifica diametro e lunghezza secondo disegno n° LHCMB __A0170

MISURA	MEDIA	1°	2°	3°	4°	5°
Ø in mm	**54,96**	54,85	55,03	54,97	54,97	54,97
Ø in mm	**55,01**	54,98	55,02	55,03	55,03	55,01
Ø in mm	**54,98**	54,98	55,01	54,94	55,02	54,95
Ø in mm	**54,98**	55,02	55,01	54,95	54,96	54,95
Ø in mm	**54,96**	54,92	54,89	54,95	55,02	55,01
Ø in mm	**54,98**	54,94	54,98	54,97	55,02	55,01
Ø in mm	**54,94**	54,94	54,93	54,95	54,89	54,98
Ø in mm	**54,94**	54,86	54,90	55,01	54,96	54,98
Ø in mm	**54,94**	54,96	54,96	54,91	54,92	54,93
Ø in mm	**54,97**	54,93	54,94	54,89	55,06	55,02
Ø in mm	**54,91**	54,94	54,85	54,93	54,91	54,90
Ø in mm	**54,92**	55,01	54,84	54,83	54,94	54,96
Ø in mm	**54,91**	54,96	54,94	54,96	54,86	54,83
Ø in mm	**54,86**	54,84	54,80	54,90	54,89	54,89
Ø in mm	**54,93**	54,89	54,94	54,98	54,90	54,92
Ø in mm	**54,95**	54,98	54,90	54,96	54,98	54,94
Ø in mm	**54,90**	54,89	54,86	54,92	54,92	54,92
Ø in mm	**54,99**	55,02	55,00	54,96	54,99	54,98
lunghezza mm	**2938,60**	2938	2939	2939	2940	2937
lunghezza mm	**2935,00**	2935	2935	2935	2936	2934

TOP GLASS s.p.a.
Via Bergamo,15-20096 Pioltello (MI) Italia-www.topglass.it E-mail: info@topglass.it- Tel.: (+39)02 929186.1
Cod.Fisc.03067020150-P.IVA05112050157-C.C.A.A.MI1284295-Reg.Imp.Mi284271-Cap.Soc.1.500.000.000 int.vers

TOP

GLASS

lunghezza mm	**2935,20**	2935	2934	2935	2937	2935
lunghezza mm	**2935,00**	2934	2935	2936	2935	2935
lunghezza mm	**2936,00**	2935	2937	2938	2934	2936
lunghezza mm	**2934,60**	2934	2934	2936	2935	2934
lunghezza mm	**2935,20**	2934	2934	2936	2936	2936
lunghezza mm	**2935,40**	2933	2934	2936	2936	2938
lunghezza mm	**2935,60**	2934	2935	2936	2937	2936
lunghezza mm	**2935,40**	2933	2937	2936	2936	2935
lunghezza mm	**2935,60**	2936	2935	2935	2936	2936
lunghezza mm	**2937,40**	2931	2939	2938	2939	2940
lunghezza mm	**2938,60**	2938	2939	2939	2940	2937
lunghezza mm	**2935,00**	2935	2935	2935	2936	2934
lunghezza mm	**2935,20**	2935	2934	2935	2937	2935
lunghezza mm	**2935,00**	2934	2935	2936	2935	2935
lunghezza mm	**2936,00**	2935	2937	2938	2934	2936
lunghezza mm	**2935,40**	2936	2936	2934	2935	2936

Operatore : Gianluca Farina

TOP_GLASS S.p.A.

CERN
CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
———

the
Large Hadron Collider
project

Certificate of Conformity
for CERN Delivered Components

Part name:	Instrumentation wiring components
Delivery to:	Ansaldo
Part ID:	HCMB__A127
Serial No. / Batch No.:	R19574
Manufacturer:	Axon
Contract / Order No.:	CA 1169999
Comment on delivery:	In addition to the instrumentation wires being the subject of the above references, this delivery includes all the auxiliary components for 28 dipole cold masses equipment.
Responsible person at CERN:	Gérard Brun — ***Tel.*** +00 41 22 767 3725 — ***E-mail.*** Gerard.Brun@cern.ch
Related tech. specification:	DO-18543/LHC/LHC
Related drawings:	No
Acceptance test references:	Into Technical Specification
Acceptance test results:	Accepted

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
05-06-01	Gérard Brun	

R. 21/06

COGNE ACCIAI SPECIALI S.p.A.
11100 AOSTA - VIA PARAVERA, 16
TEL. +39.0165.3021 - FAX +39.0165.302296
CAP. SOC. 40.000.000.000 INT. VERS.
VAT: IT00571320078
P.I. 00571320078 C.F. 02187360987
REG. IMP. AO003 - 7234 REA 50474

Locking rods inserts Ø5 (machined)

(A02) CERTIFICATO DI COLLAUDO SECONDO DIN 50049/EN 10204 - 3.1.B
(A03) NUMERO DEL DOCUMENTO 2000020363
PAGINA 1/2

ANSALDO

(A06) COMMITTENTE .:
(A07) ORDINAZIONE DEL COMMITTENTE .:
(A01) STABILIMENTO PRODUTTORE .: AOSTA, VIA PARAVERA 16
(A05) REDATTORE DEL DOCUMENTO .: SERVIZIO QUALITA'
(A08) CONFERMA D'ORDINE DEL PRODUTTORE :
(A04) SIGLA STABILIMENTO PRODUTTORE .: COGNE

SPECIFICA :
(B01) PRODOTTO .: CAS-D-K700-[illegible]2 — REGOLA TECNICA .: [illegible]
(B04) STATO DI FORNITURA .: 2077 TRA Trafilati Tondi ISOH9
RP Ricotto Leggermente Incrud.
(B11) DIMENSIONI DEL PRODOTTO (MM): .6,000
(B02) QUALITA' ACCIAIO .: WN.1.4301 — (B12) LUNGH. DEL PRODOTTO (MM): 03050 /03100
(B08) NUMERO DI COLATA .: 072856 — MARCA COGNE : F304
(B06) MARCATURA DEL PRODOTTO .: (B07) NUMERO DI SCHEDA .: 17914
SIGLA SOST. N. COLATA : 791.

CONFORMITA' ALLA NORMA EN 10088/3
CONFORMITA' ALLA NORMA DIN 17440 W2, W.1.4301
FABBRICAZIONE AL FORNO ELETTRICO + AOD + COLATA CONTINUA
LA FORNITURA E' CONFORME ALLE PRESCRIZIONI CONTRATTUALI

(C71) COMPOSIZIONE CHIMICA - ANALISI DI COLATA

Ref.	020000023859	80.000,000								
ELEMENTI	C	Si	Mn	P	S	N	Cr	Mo	Ni	Cu
OTTENUTO	0,049	0,450	1,880	0,028	0,029	0,086	18,100	0,430	8,100	0,500
EMENTI	Co									
TENUTO	0,070									

OVA DI DUREZZA ALLO STATO DI FORNITURA

E.	790000014224		
RMA	EU 3/79-2/80	PROVA DI DUREZZA	HB
TENUTO	224,0		

OVA DI TRAZIONE ALLO STATO DI FORNITURA

"	790000014224					
NORMA	EN 10002				(C02) ORIENTAMENTO DELLE PROVETTE L	
UNITA' DI MISURA	RM NMM	RP02 NMM	A % 5.0 D	Z %	RP1 NMM	
OTTENUTO	740,00	592,00	35,80	70,40	625,00	
	744,00	595,00	35,50	70,00	629,00	
	749,00	598,00	35,10	69,50	634,00	
	736,00	588,00	36,20	70,90	621,00	

MICROPUREZZA

Ref.	790000014224
NORMA	NP04106 5.02.01

SANDVIK

CERTIFICATE

No. A/01-873159 Rev 00
Date 2001-09-03 **Page** 1/2

INSPECTION CERTIFICATE acc to
EN 10 204 3.1.B

ANSALDO SUPERCONDUTTORI SPA
C.SO PERRONE 73 R
16152 GENOVA GE

INSPECTION STAMP
QA-TUBE

ASC →

Customer References

289 — Customer order 2001-08-30

250-00991 ANSALDO SU

Sandvik References

Order No.	Subs No.	ABSS Dispatch note
143334	24280	49819/54

ABSS No. 300-46103 C.Code 63

Material description
SEAMLESS STAINLESS COLD FINISHED
TUBE IN METRIC SIZES

Steel making process
Electric furnace

Steel/material Designations

Sandvik	W.nr
3R12	1.4306

DIN
X 2 CRNI 19 11

Technical requirements
DIN 17458 Testing class 1

EXTENT OF DELIVERY

It	Product designation	Heat	Lot	Pieces	Kg	M
01	TST-3R12-17.2-1.6 17.20 X 1.60	452882	16559	333	1257.0	1998.00
			Total	333	1257.0	1998.00

Tolerances according to EN ISO 1127: D3/T3

TEST RESULTS
Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni
452882	0.007	0.36	1.15	0.026	0.007	18.26	10.09

Tensile test at room temperature

	Yield strength N/mm2		Tensile strength N/mm2	Elongation %
Lot	Rp0.2	Rp1.0	Rm	A
16559	306	351	637	55
	309	354	638	54
	307	354	636	53
	304	347	629	54
	305	348	630	54
	304	348	628	54

Quality assurance - Carl-Filip Lindahl/ QA-manager Tube & Pipe
MTC Service / Certificates

Following controls/tests have been satisfactorily performed:
- Flattening test
- Material Identification
- Leak test: Eddy current test acc to SEP 1925
- Visual inspection and dimensional control.

Heat Treatment:
Solution annealed and quenched.

Marking:
SANDVIK 3R12 NFA 49-117 SS 2352-22 WNR 1.4306 TP 304L Z2CN18-10 M S PK1 17.20 X 1.60 MM HT 452882 SS LOT 16559 *QA-TUBE*

The number of tests is based on the size of the manufacturing lot before cutting to finished lengths.

The delivered products comply with the requirements of the order.

The material is manufactured according to a Quality system, approved and registered to ISO 9001.

The certificate is produced with EDP and valid without signature

Rods ~~A0135~~ A132

TRAFILERIE BEDINI
GRUPPO USINOR

S.R.L. - Cap. Soc. 5.000.000.000
Cod. Fisc. 01004760052 - P. IVA IT 10810010156
Iscr. Reg. Impr. Milano 333941
R.E.A. Milano 1349150
Sede e Stabilimento: Via G. Di Vittorio, 34-36
20068 Peschiera Borromeo (MI) Italia
Tel. ++39 02.54.74.31 - Fax ++39 02.54.73.483

AZIENDA CERTIFICATA
UNI EN ISO 9002:94
IQG 9221

DOC. DI TRASPORTO **0083586** **20/09/01**

N° Cliente/tel : 002011 /010-6551 - 7324
Filiale : 12 Agenzia P.B.
Responsabile : 0L1 POGGIOLI Pagina : 1

CLIENTE
ANSALDO SUPERCONDUTTORI S.P.A.
VIA MARTINI N.7

17011 ALBISSOLA SUPERORE SV1
Italy

Destinazione della merce

DESTINATARIO
ANSALDO SUPERCONDUTTOTI S.P.A.
CORSO PERRONE N.71 ROSSO

16100 GENOVA GE0
Italy

Indicazioni relative al trasporto

Trasporto :	Vettore
P.) :	CPT
Resa :	Ns.Deposito
Ns. Deposito :	Pesch.Borr.
Linea trasporto :	H 006 Lig

Numero colli 7
Imballo : CH 007
Mod. pagamento :
Causale uscita : VENDITA

Trasportatore Data Ora Firma
FACCHINI TRASPORTI SNC
VIA VOLTA 33
20083 GAGGIANO MI1
21 SET. 2001

Peso netto	Peso lordo	Tara : 1610,000
3333,000	4943,000	Valore :

N° Po	Descrizione	Quantità ordinata	Quantità spedita	U.	SALD	Peso Netto
	NR. ORDINE 106064402 15/06/01 Riferimento VS.ORD.193 DEL 31/5/01 UM02095 Corr. Int. : Gandini Rita					
1	Barre Tonde 4307-304L Trafilato Luc. Solubilizzato 12,0 h9 VS.ART.0209.08547.0001 N.256 TIRANTI DIS.671RM0854 R.0 COD.FORN.14.1.06.0133 POS.1	3300,000	3333,000	KG	S	3333,000

Data	Nr.Lot	Nr.Colli	Quantita		Tare	Poids Brut
112055	0447809	00001	480,000	Casse	230,00	710,000
112055	0447810	00001	480,000	Casse	230,00	710,000
112055	0447811	00001	453,000	Casse	230,00	683,000
123401	0447805	00001	480,000	Casse	230,00	710,000
123401	0447806	00001	480,000	Casse	230,00	710,000
123401	0447807	00001	480,000	Casse	230,00	710,000
123401	0447808	00001	480,000	Casse	230,00	710,000

2 Varie .
CONTRIBUTO SPESE ATTREZZATURA VS.ART.0209.08547.0002 POS.2

ANSALDO
MAGAZZINO - MAGN
FIRMA

Vettori Data Ora Firma

Firma del Cliente
20/09/01
24 SET. 2001

Ubicazione PROVVISORIA
48 NORD
Ubicazione DEFINITIVA

NATURA DEI BENI : ACCIAIO

TRAFILERIE BEDINI
GRUPPO USINOR

S.R.L. - Cap. Soc. 5.000.000.000
Cod. Fisc. 01004760052 - P. IVA IT 10810010156
Iscr. Reg. Impr. Milano 333941
R.E.A. Milano 1349150
Sede e Stabilimento: Via G. Di Vittorio, 34-36
20068 Peschiera Borromeo (MI) Italia
Tel. ++39 02.54.74.31 - Fax ++39 02.54.73.483

AZIENDA CERTIFICATA UNI EN ISO 9002/94 ISO 9221

Bolla/N°BL/DL N°/Lief.	N° Certificat./Prüf N°	Produttore/Usine produc./Manufact./Herstell.
83586	18622	090300

CERTIFICATO DI COLLAUDO 3.1.B

MODELLO 11/C Ed.0 rev.0
EN 10204/DIN 50049

Prodotto Erzeugnisform
Produit Product

Cliente e/o destinatario - Client et/ou destinataire - Besteller und/oder Empfaenger
Purchaser and/or Consignee
ANSALDO SUPERCONDUTTORI S.P.A.

N° ordine cliente - Votre référence - Ihre Aufstrag Nr - Your reference
VS.ORD.193 DEL 31/5/01 UM02095

Qualità e specifiche tecniche - Nuance et spécifications techniques - Stalsorte und Pruefbedingungen - Quality and Specifications

4307-304L h9 Barre Tonde Trafilato Luc. Solubilizzato

Stato di fornitura - Etat de livraison - Lieferzustand - As delivered (1)	Stato metallurgico - Etat métallurgique - Heat treatment condition - Lieferzustand
Trafilato Luc.	Solubilizzato

N° Conferma d'ordine Accusé de reception Auftragsbest N° Acknowledgment N°	Posizione N° Poste Post Nr Item N°	N° lotto interno N° de lot interne Interne los Nr Internal batch N°	Profilo Profil Profile Shape	Dimensione Dimension Abmessung Size	Tolleranza Tolérance Toleranz Tolerance	Lunghezza Longueur Laenge Length	Peso netto Masse Gewicht Weight
106064402	1	0447808	Barre Tonde	12,0000	H9	Fissa	480,000

Lotto fornitore Lot producteur Herant los Lister batch	N° Colata N° de coulée Schmelz Nr Heat N°	Trazione - Traction - Zugversuch - Tensile test Lim. di snervamento Limite d'Elasticité Streckgrenze Yield Strength 0,2 %	1 %	Carico di rottura Résistance tract. Zugfestigkeit Tensile strength	Allungamento Allongement Dehnung Elongation %	Strizione Striction Einschnürung Red of Area %		Resilienza - Résilience - Kerbschlagzaehigkeit - Notch Toughness Forma Tipo Form Tipo	Sede Sened Richt. Direct.	Temperatura di prova Température de prova Pruaftemperatur Prova Temperature	Valori Valori individuali Einzelwerte Valore individual	Media Moyenne Mittelwerte Average	Durezza Dureté Haerte Hardness
		RP MPA		RM MPA	A5								HB
	123401	542		735	30								243

		C	SI	MN	NI	CR	MO	CU	N	S	P
	123401	0,016	0,290	1,220	8,090	18,360	0,370	0,500	0,072	0,026	0,030
		TI	CO		ZR	AL					
	123401	0,010	0,094		0,010	0,004					

ANSALDO 671 RM08547 REV 0
RETTILINEARITA = 0,90 MM/MT

Note - Notes - Remarks - Bemerkungen

Il 20/09/01
Firma del responsabile
L.DIFRAIA

Resp. controllo qualità
Resp. contrôle qualité
Sachverstandiger

Controllo marcatura, visivo e dimensionale : soddisfacente. Si certifica che i prodotti sopra descritti sono conformi alle prescrizioni dell'ordine (1)
L'analisi chimica è copia conforme a quella presente sul certificato del produttore

Contrôle de marquage, d'aspect et de dimensions satisfaisant. Nous certifions que le présent document reproduit avec exactitude les données du certificat producteur. L'analyse chimique a été relevée du certificat de la matière première.

Bezeichnung, besichtigung und ausmessung : Ohne beanstandung. Wir bestatigen hiermit dass die obengenannten erzeuggnisse den bestellung vorschriften entsprechen. Die chemishe zusammensetzung entspricht den lieferanten analyse.

The chemical analysis results are true and correct copy of the raw material supplier's certificate.
Marking, inspection and measurement : Without objections. We certify that the above mentioned and ... are in accordance with the order

TRAFILERIE BEDINI
GRUPPO USINOR

...L. - Cap. Soc. 5.000.000.000
...od. Fisc. 01004760052 - P. IVA IT 10810010156
Iscr. Reg. Impr. Milano 333941
R.E.A. Milano 1349150
Sede e Stabilimento: Via G. Di Vittorio, 34-36
20068 Peschiera Borromeo (MI) Italia
Tel. ++39 02.54.74.31 - Fax ++39 02.54.73.483

AZIENDA CERTIFICATA
UNI EN ISO 9002:94
IQG 9221

Bolla/N°BL/DL N°/Lief.	N° Certificat./Pruf N°	Produttore/Usine produc./Manufact./Herstell.
83586	18622	090300

CERTIFICATO DI COLLAUDO 3.1.B
MODELLO 11/C Ed.0 rev.0
EN 10204/DIN 50049

Prodotto Erzeugnisform
Produit Product

Cliente e/o destinatario - Client et/ou destinataire - Besteller und/oder Empfaenger
Purchaser and/or Consignee
ANSALDO SUPERCONDUTTORI S.P.A.

N° ordine cliente - Votre référence - Ihre Aufstrag Nr - Your reference
VS.ORD.193 DEL 31/5/01 UM02095

Qualità e specifiche tecniche - Nuance et spécifications techniques - Stalsorte und Pruefbedingungen - Quality and Specifications
4307-304L h9 Barre Tonde Trafilato Luc. Solubilizzato

Stato di fornitura - Etat de livraison - Lieferzustand - As delivered (1)
Trafilato Luc.

Stato metallurgico - Etat métallurgique - Heat treatment condition - Lieferzustand
Solubilizzato

N° Conferma d'ordine / Accusé de reception / Aufstragsbest N° / Acknowledgment N°	Posizione / N° Poste / Post Nr / Item N°	N° lotto interno / N° de lot interne / Interne los Nr / Internal batch N°	Profilo / Profil / Profile / Shape	Dimensione / Dimension / Abmessung / Size	Tolleranza / Tolérance / Toleranz / Tolerance	Lunghezza / Longueur / Laenge / Length	Peso netto / Masse / Gewicht / Weight
106064402	1	0447805	Barre Tonde	12,0000	H9	Fissa	480,000
		0447806					480,000
		0447807					480,000

Lotto fornitore / Lot producteur / Lieferant los / Master batch	N° Colata / N° de coulée / Schmelz Nr / Heat N°	Trazione - Traction - Zugversuch - Tensile test: Lim. di snervamento / Limite d'Elasticité / Streckgrenze / Yield Strength 0,2 %	Trazione: 1 %	Carico di rottura / Résistance tract. / Zugfestigkeit / Tensile strength	Allungamento % / Allongement % / Dehnung % / Elongation %	Strizione % / Striction % / Einschnuerung % / Red of Area %	Resilienza - Résilience - Kerbschlagzaehigkeit - Notch Toughness: Forma / Tipo / Form / Tipo	Senso / Sense / Richt. / Direct.	Temperatura di prova / Temperature d'essai / Pruefteperatur / Test Temperature	Valori / Valori individuali / Einzelwerte / Valore individual	Media / Moyenne / Mittelwerte / Average	Durezza / Dureté / Haerte / Hardness
		RP MPA		RM MPA	A5							HB
	123401											
	123401	542		735	30							243
	123401											

	C	SI	MN	NI	CR	MO	CU	N	S	P
123401	0,016	0,290	1,220	8,090	18,360	0,370	0,500	0,072	0,026	0,030
123401	0,016	0,290	1,220	8,090	18,360	0,370	0,500	0,072	0,026	0,030
123401	0,016	0,290	1,220	8,090	18,360	0,370	0,500	0,072	0,026	0,030

	TI	CO		ZR	AL
123401	0,010	0,094		0,010	0,004
123401	0,010	0,094		0,010	0,004
123401	0,010	0,094		0,010	0,004

Note - Notes - Remarks - Bemerkungen

ANSALDO 671 RM08547 REV 0
Rettilineità = 0,90 mm./m.

Il 20/09/01
Firma del responsabile
L.DIFRAIA

Resp. controllo qualità
Resp. contrôle qualité
Sachverstandiger
Quality control Mgr

(1) Controllo marcatura, visivo e dimensionale : soddisfacente. Si certifica che i prodotti sopra descritti sono conformi alle prescrizioni dell'ordine
L'analisi chimica è copia conforme a quella presente sui certificato del produttore

Contrôle de marquage, d'aspect et de dimensions satisfaisant. Nous certifions que le présent document reproduit avec exactitude les données du certificat producteur. L'analyse chimique a été relevée du certificat de la matière première.

Bezeichnung, besichtigung und ausmessung : Ohne beanstandung. Wir bestatigen hiermit dass die obengenannten erzeuggnisse den bestellung vorschriften entsprechen. Die chemishe zusammensetzung entspricht den lieferanten analyse.

The chemical analysis results are true and correct copy of the raw material supplier's certificate.
Marking, inspection and measurement : Without objections. We certify that the above mentioned products are consistent with the order prescriptions.

TRAFILERIE BEDINI
GRUPPO USINOR

S.R.L. - Cap. Soc. 5.000.000.000
Cod. Fisc. 01004760052 - P. IVA IT 10810010156
Iscr. Reg. Impr. Milano 333941
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Sede e Stabilimento: Via G. Di Vittorio, 34-36
20068 Peschiera Borromeo (MI) Italia
Tel. ++39 02.54.74.31 - Fax ++39 02.54.73.483

AZIENDA CERTIFICATA
Uni EN ISO 9002:94
IQNet

Bolla/N°BL/DL N°/Lief.	N° Certificat./Pruf N°	Produttore/Usine produc./Manufact./Herstell.
83586	08370	090300

CERTIFICATO DI COLLAUDO 3.1.B

MODELLO 11/C Ed.0 rev.0
EN 10204/DIN 50049

Prodotto Erzeugnisform
Produit Product

Cliente e/o destinatario - Client et/ou destinataire - Besteller und/oder Empfaenger
Purchaser and/or Consignee
ANSALDO SUPERCONDUTTORI S.P.A.

N° ordine cliente - Votre référence - Ihre Aufstrag Nr - Your reference
VS.ORD.193 DEL 31/5/01 UM02095

Qualità e specifiche tecniche - Nuance et spécifications techniques - Staisorte und Pruefbedingungen - Quality and Specifications

4307-304L h9 Barre Tonde Trafilato Luc. Solubilizzato

Stato di fornitura - Etat de livraison - Lieferzustand - As delivered (1)	Stato metallurgico - Etat métallurgique - Heat treatment condition - Lieferzustand
Trafilato Luc.	Solubilizzato

N° Conferma d'ordine / Accusé de reception / Auftragsbest N° / Acknowledgment N°	Posizione / N° Poste / Post Nr / Item N°	N° lotto interno / N° de lot interne / Interne los Nr / Internal batch N°	Profilo / Profil / Profile / Shape	Dimensione / Dimension / Abmessung / Size	Tolleranza / Tolérance / Toleranz / Tolerance	Lunghezza / Longueur / Laenge / Length	Peso netto / Masse / Gewicht / Weight
106064402	1	0447809	Barre Tonde	12.0000	H9	Fissa	480,000
		0447810					480,000
		0447811					453,000

Lotto fornitore / Lot producteur / Lieferant los / Supplier batch	N° Colata / N° de coulée / Schmelz Nr / Heat N°	Trazione - Traction - Zugversuch - Tensile test: Lim. di snervamento / Limite d'Elasticité / Streckgrenze / Yield Strength 0,2 %	Lim. di snervamento 1 %	Carico di rottura / Résistance tract. / Zugfestigkeit / Tensile strength	Allungamento / Allongement / Dehnung / Elongation %	Strizione / Striction / Einschnürung / Reduction of Area %	Resilienza - Résilience - Kerbschlagzaehigkeit - Notch Toughness: Forma / Tipo / Form / Tipo	Sens / Senso / Richt. / Direct.	Temperatura di prova / Température d'essai / Pruefteмperatur / Test Temperature	Valori / Valori individuali / Einzelwerte / Valore individual	Media / Moyenne / Mittelwerte / Average	Durezza / Dureté / Haerte / Hardness
		RP MPA		RM MPA	A5							
	112055	534		730	32							
	112055											
	112055											

	C	SI	MN	NI	CR	MO	CU	N	S	P
112055	0,030	0,400	1,090	9,040	18,100	0,410	0,500	0,058	0,025	0,026
112055	0,030	0,400	1,090	9,040	18,100	0,410	0,500	0,058	0,025	0,026
112055	0,030	0,400	1,090	9,040	18,100	0,410	0,500	0,058	0,025	0,026

	TI	CO		ZR	AL					
112055		0,099			0,003					
112055		0,099			0,003					
112055		0,099			0,003					

ANSALDO 671 1RMo8547 REV0
Rettilineità = 0,8 mm/mt.

Note - Notes - Remarks - Bemerkungen

Il 20/09/01
Firma del responsabile
L.DIFRAI

Controllo marcatura, visivo e dimensionale : soddisfacente. Si certifica che i prodotti sopra descritti sono conformi alle prescrizioni dell'ordine (1)
L'analisi chimica è copia conforme a quella presente sul certificato del produttore

Contrôle de marquage, d'aspect et de dimensions satisfaisant. Nous certifions que le présent document reproduit avec exactitude les données du certificat producteur. L'analyse chimique a été relevée du certificat de la matière première.

Bezeichnung, besichtigung und ausmessung : Ohne beanstandung. Wir bestatigen hiermit dass die obengenannten erzeuggnisse den bestellung vorschriften entsprechen. Die chemishe zusammensetzung entspricht den lieferanten analyse.

The chemical analysis results are true and correct copy of the raw material supplier's certificate.
Marking, inspection and measurement : Without objections. We certify that the above mentioned products are consistent with the order prescriptions.

Resp. controllo qualità
Resp. contrôle qualité
Sachverstandiger
Quality control Mgr

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Temperature sensor lamination type A4	HCMB_ _ A128	-	MAL00006	Batch N° MAL00006
	HCMB_ _ A128	-	MAL00009	Batch N° MAL00009
	HCMB_ _ A128	-	MAL00012	Batch N° MAL00012
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor:***	ANSALDO		
7. ***Contract / Order No :***	Order for LHC dipole series production		
8. ***Responsible person at CERN:***	Aniello RUSSO	***Tel.***	00 41 22 767 2977
		E-mail.	Aniello.Russo@cern.ch
9. ***Reference specification:***	LHC-MB_A-C1-0019		
10. ***Reference drawings:***	LHCMB_ _A0128		
11. ***Part manufactured by:***	Ernesto Malvestiti s.p.a (IT)		
12. ***Acceptance test refs:***	See attachment paper		
13. ***Acceptance test results:***	Conform to Technical Specification		
14. ***Comments:***	The total quantity of sensor lamination type A4 is for all LHC series dipoles.		

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
4 – 2 - 2002	Aniello RUSSO	

ERNESTO MALVESTITI SPA
STAMPI
DI PRECISIONE

CERTIFICATE OF CONFORMITY FOR FINE BLANKED YOKE LAMINATIONS

ORDER/CONTRACT N° **CA1183822**

Batch id: M A L 0 0 0 0 6 **Box id:**

Batch Consisting of 10 BOXES with 220 pieces = 2200 pcs.

Steel Sheet Pallet Number: 952216-0002/5; 958743-0003/4; 956687-0003

Batch Type: Lamination TYPE A4, LHCMB_ _A0128

Date of Batch Production: June-July / 2001 **Firm Destination: CERN**

TEST RESULTS

Sample n°	Test Level	Report N°*	Date	Responsible	Signature
First	A	A006/1	28-Jun-01	Name: Umberto Raggio	Umberto Raggio

*This Cerficate and results are saved on file download on CERN Website and available through CERN project Ingeneer.

We certify that the quality control and the results are conforming to the requirements of CERN order/contract mentioned above.

Date: 18/7/2001 **Seal/Segnature** Umberto Raggio

Gruppo Fabbricazioni Meccaniche

GFM S.R.L.
24030 BREMBATE SOPRA (BG) Italy - Via Lesina, 45
Telefono 035.33.29.98 - Telefax 035.33.29.97
E-Mail: gfmgan@tin.it

ATTESTATO DI CONFORMITA' *Conformity certificate*	**NR./ no.** 83
	Data / *date* 20/07/2001
CLIENTE / customer ANSALDO SUPERCONDUTTORI SPA Via N.Lorenzi,8 16152 Genova	**VS.ORDINE** / *Ord.n.* **BC234322** **Data** / *date* 24/05/2001
POSIZIONE / *Item* **002-004**	**COMMESSA** / *Job* **F10209EM**
Ns.bolla n. **715** **del** **20/07/2001**	**Allegato certificati materiale**

In riferimento al Vostro ordine sopra citato

con la presente attestiamo che il materiale consegnato

è conforme a quanto da Voi richiesto e che il controllo

dimensionale è conforme ai disegni

Allegati
Certificato Columbus n°47677

ESEGUITO DA /made by	**G F M srl** **Collaudo** *A.Oldoni*	**BENESTARE DA** / *cheked by*

COLUMBUS STAINLESS

INSPECTION CERTIFICATE 3.1.B

To: EN 10204

No. / Nr. 154480
Date / Datum 26 Mar 199

P.O.Box ... MIDDELB... South A...
Tel: (27-13) 247-...
Fax: (27-13) 248-...
COLUMBUS STAINL...

MANUFACTURER'S MARK / Herstellerzeichen: L7

MELTING PROCESS / Erschmelzungsart: E/CLU

SABS

Customer / Besteller	O/A No. / Unser Auftrag Nr.	ITEM No. / Pos Nr.	INSPECTOR'S ST...
METALFAR INTERNATIONAL SARL VIA LISANO 2 MASSAGNO LUGANO SWITZERLAND 6900	00047677	033	L7
	CUSTOMER ORDER No. / Kundenbestell-Nr.: IT/08/1124	INSPECT No. / Prüf. Nr.	Zeichen des Sachverständig...

PRODUCT / Erzeugnisform	HEAT No. / Schmelze-Nr.	MPO No.
NO 1: Hot Worked, Heat Treated and Pickled.	308499	3084991/1

SPECIFICATIONS / Norm

DIN 17440 SEPT 1996
A... A240 -96A
ASME SA240-1995 (A96)
NF A 36-209 MAY 1990
EN 10029: 1991 CLASS A

MATERIAL CODE / Werkstoff

1.4306
304L
304L
Z3CN1810

FOTOCOPIA CONFORME ALL'ORIGINALE
... S.p.A.
REPARTO INOX
16 ... 2000
CORSICO

REQUIREMENTS / Anforderungen | KURZNAME X2CrNi 19 11 | QUANTITY / Stückzahl: 2 | MASS kg / Gewicht: 3201

DIMENSIONS / Abmessung: 1500 mm x 22.000 mm x 6000

CHEMICAL ANALYSIS / Chemische Zusammensetzung

	MIN	MAX	LADLE / Schmelze
% C		0.030	0.022
		0.015	0.0052
% P		0.045	0.024
% Mn		2.00	1.12
% Si		1.00	0.56
% Ni	10.00	12.00	10.23
% Cr	18.00	20.00	18.51
% Mo			
% Ti			
% N		.1100	0.0345

MECHANICAL PROPERTIES / Mechanische Werte

	Test Dir.	Rp 0.2 (0.2% Proof Str)	Rp 1.0 (1% Proof Str)	Rm (UTS)	A (Elongation)	Dimensions of Specimen	Hardness HB1840	Bend Test / Biegeversuch	Impact Test / Kerbschlagarbeit ISO V
Req @ 20°C MPa		180 min	215 min	460-680	40 min	0.00 x 22.00			
1	T	269	319	592	48	22.00	133		
2									
Req @ °C									
Req @ °C									
Req @ °C									

INTERGRANULAR CORROSION / Int. Krist. Korrosion

SPECIFICATION Norm	RESULT
DIN 50914	PASS

HEAT TREATMENT / Wärmebehandlung

Anneal °C	Quench
1000 - 1080	AIR/ SPRA...

Tests to verify batch and quality have been made.
Verwechslungsprüfung wurde durchgeführt.

Visual and dimensional control: no exceptions.
Besichtigungen und Abmessungen: ohne Beanstandung.

The delivery is in accordance with the order.
Die Lieferung entspricht den Bestellbedingungen.

This material is free from mercury contamina... The radiation level exhibited by this material i... greater than the normal background level.

This document may only be reproduced i... Written approval from the Mechanical Met... Laboratory is required.

Prime Material

NS. COM. 968/00 -GFTI-

COLUMBUS STAINLESS
HENDRINA ROAD, MIDDELBURG
MPUMALANGA, SOUTH AFRICA

WORKS EXPERT

TOTALE P.01

TRAFILERIE BEDINI
GRUPPO USINOR

- Cap. Soc. 5.000.000.000
d. Fisc. 01004760052 - P. IVA IT 10810010156
scr. Reg. Impr. Milano 333941
R.E.A. Milano 1349150
Sede e Stabilimento: Via G. Di Vittorio, 34-36
20068 Peschiera Borromeo (MI) Italia
Tel. ++39 02.54.74.31 - Fax ++39 02.54.73.483

AZIENDA CERTIFICATA
UNI EN ISO 9002:94
IQ0 6021

DOC. DI TRASPORTO 0075794 14/11/00

N° Cliente/tel : 002010 /010-65551
Filiale : 12 Agenzia P.B.
Responsabile : 0L1 POGGIOLI Pagina : 1

CLIENTE
ANSALDO ENERGIA S.P.A.
VIA N. LORENZI N.8

16152 GENOVA GE0
Italia

Destinazione della merce

DESTINATARIO
ANSALDO ENERGIA S.P.A.(CF 06278)
VIA N. LORENZI N.8

16152 GENOVA GE0
Italia

Indicazioni relative al trasporto

Trasporto : Vettore
Porto : CPT
F.O. : Ns.Deposito
Ns. Deposito : Pesch.Borr.
Linea trasporto : H 006 Lig

Numero colli 2
Imballo : CH 002
Mod. pagamento :
Causale uscita : VENDITA

Trasportatore	Data	Ora	Firma	Peso netto	Peso lordo	Tara : 612,000
G FACCHINI GAGGIANO (MI)	16 NOV. 2000			2766,000	3378,000	Valore :

N° Po	Descrizione	Quantità ordinata	Quantità spedita	U.	SALD	Peso Netto
	NR. ORDINE 004055128 21/04/00 **Riferimento GE-BC 231402 GEFO GMO 0 0** **Corr. Int. : Gandini Rita**					
1	Barre Tonde 4435IMA-316LMO Rettificato Solubilizzato 14,0 h7 POS.1 - UM01862 ABC 2 Biselli 45 BARRE MM.14603+0-3 COMM. F10209EM F60 LHC GINEVRA VS.DIS.620RM08240 REV.C Colata Nr.Lot Nr.Colli Quantita 312031 0374965 00001 1235,000 Casse	1225,000	1235,000	KG	S	1235,000
2	Barre Tonde 4435IMA-316LMO Rettificato Solubilizzato 22,0 h7 POS.2 UM 1862 ABC 2 Biselli 45 BARRE MM. 14657+0-3 COMM. F10209EM F60 LHC GINEVRA VS.DIS.620RM08241 REV.D Colata Nr.Lot Nr.Colli Quantita 015035 0374970 00001 1531,000 Casse	1510,000	1531,000	KG	S	1531,000
4	Imballo Imballo POS.3 ABC COMM.F10209EM F60					

Vettori	Data	Ora	Firma	Firma del Cliente
				14/11/00

NATURA DEI BENI : ACCIAIO

BBII

鋼材検査証明書
INSPECTION CERTIFICATE

新日本製鐵株式會社
Nippon Steel Corporation
本社：〒100-8071 東京都千代田区大手町二丁目6番3号
HEAD OFFICE 6-3,OTEMACHI 2-CHOME,CHIYODA-KU,TOKYO 100-8071,JAPAN
光製鐵所：〒743-8510 山口県光市大字鼓田3434番地
HIKARI WORKS 3434,SHIMATA,HIKARI CITY,YAMAGUCHI PREF.743-8510,JAPAN

注文者 SHIPPER: MITSUI & CO., LTD.
注文者照合番号 REFERENCE No.: 17961 -S809511
契約番号 CONTRACT No.: 0-868-TL-5-0-EA03
商品名 COMMODITY: COLD ROLLED STAINLESS STEEL SHEET IN COIL
規格 SPECIFICATION: YUS130S
特記 NOTE:
ITEM No.: 01 SIZE: 0.5X840XC

需要家 CUSTOMER: EUROPEAN ORGANIZATION FOR NUCL-EAR RESERCH 'CERN'
需要家管理番号 CUSTOMER'S CONTROL No.:
FINISH : NO.2B

証明書番号 CERTIFICATE No.: 00TL102988
頁 PAGE: 1E
発行年月日 DATE OF ISSUE: 2000-12-14

行番 ITEM No	管理番号・CONTROL No. CASE No.	検査番号 INSPECTION No.	(製鋼番号 CAST No.) コイル番号 COIL No.	員数 QUANTITY	NET MASS ACT. KG(G.M)	T.T(GL=50MM) YS-L 0.2%	TS-L MPA	EL-L %	H.T CAST ANALYSIS (%) HV	C X100	SI X100	MN X10	P X1000	S X1000	NI X100	CR X100	MO X100	N X100
01	1	0Y-32574	(E85525) 56-5816		2607 (2667)	425	783	45	213	8	46	115	20	0	656	1774	8	30

注釈 NOTES
ACT. : ACTUAL
(G.M) : GROSS MASS
L : LONGITUDINAL
T.T : TENSILE TEST
H.T : HARDNESS TEST

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Matsumoto

光製鐵所 生産管理部
ステンレス鋼板管理グループリーダー
MANAGER, INSPECTION
HIKARI WORKS

091 E 07- 1

1. Exporter (Name, address, country)

MITSUI & CO., LTD.
2-1, OHTEMACHI 1-CHOME, CHIYODA-KU,
TOKYO, JAPAN

CERTIFICATE OF ORIGIN

issued by
The Tokyo Chamber of Commerce & Industry
Tokyo, Japan

2. Consignee (Name, address, country)

TO ORDER

*Print ORIGINAL or COPY

ORIGINAL

3. No. and date of Invoice

T1321281
2000/12/07

4. Country of Origin

JAPAN

5. Transport details

FROM : KOBE, JAPAN
TO : HAMBURG, GERMANY
BY : MAAS
ON OR ABOUT : 2001/01/09

6. Remarks

BUYER : MITSUI & CO. DEUTSCHLAND G.M.B.H.
(DUSSELDORF)
KONIGSALLEE 63-65, 40215 DUSSELDORF
GERMANY
(DUSII)

7. Marks, numbers, number and kind of packages; description of goods		8. Quantity
YUS130S CAST NO. C/NO.1 NIPPON STEEL CORP. MADE IN JAPAN	STAINLESS STEEL SHEET IN COIL 1 SKID	2.607 NET WT. M/T

9. Declaration by the Exporter

The undersigned, as an authorized signatory, hereby declares that the above-mentioned goods were produced or manufactured in the country shown in box 4.

Place and Date: Tokyo JAN 17 2001

(Signature)

(Name) Shigeo Hayashi

10. Certification

The undersigned hereby certifies, on the basis of relative invoice and other supporting documents, that the above-mentioned goods originate in the country shown in box 4 to the best of its knowledge and belief.

The Tokyo Chamber of Commerce & Industry

Yasumi Iwamasa

JAN. 17 2001

(No., Date, Signature and Stamp of Certifying Authority)

Certificate No.

TOPPANFORMS 1-6 KANDA SURUGADAI, CHIYODA-KU, TOKYO, JAPAN Japan CCI Ref. No. 1701-A

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-MB-FR-0001

EDMS Document No.
MB_0001

Certificate of Conformity
for CERN Delivered Components

Part name:	Cable Stabilisation inner and outer layer
Part ID:	HCMB__A0049/50
Serial No. / Batch No.:	0_2
Manufacturer:	TREFIMETAUX
Contract / Order No.:	CA/1168503(1)
Comment on delivery:	Consists of. 26. sets. Cold masses 4 to 30
Responsible person at CERN:	Diego Perini — ***Tel.*** +00 41 22 767 2347 — ***E-mail.*** Diego.Perini@cern.ch
Related tech. specification:	LHC-MMS/98-198 rev. 1.1 (Doc. N° IT-2325)
Related drawings:	LHCMB_A0049/50 rev. as per Tech. Spec. mentioned above
Acceptance test references:	(Measured by Projector of profile BATY G=10x)
Acceptance test results:	CONFORM (dimensions are in the indicated tolerances)

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-04-10	Carlos Lopez	

ANSALDO

Misure di permeabilità magnetica su AISI 316

Magnetic permeability meas. on AISI 316

num./rif.	spess. tot.	mu				
	(mm)	p. liscia		p. ondulata	piega a 90°	
		min.	max.	max.	min.	max.
Misure a T ambiente su campioni "vecchi" presi come riferimento						
Prot.sheet "vecchi"	0,3	1,0004	1,0006			
"	0,6		1,0020	1,0022		1,0020
"	1,2		1,0020	1,0030		1,0020
shim-retainer	0,9	1,0015	1,0030			1,0020
Misure a T ambiente prima a e dopo n.3 cicli in azoto liquido						
prot.sheet e shim-retainer						
prima dei 3 cicli in L-N2	0,6	1,0010	1,0015	1,0020	1,0020	1,0024
dopo i 3 cicli in L-N2	0,6	1,0010	1,0015	1,0025	1,0022	1,0024
lam. di prova AVESTA						
prima dei 3 cicli in L-N2	0,5		1,0012		1,0015	1,0020
dopo i 3 cicli in L-N2	0,5		1,0015		1,0015	1,0022

NOTE

Misure effettuate su più lamierini sovrapposti (in alcuni casi) e in almeno 3 punti per ciascun tipo superfi

Strumentazione: FOERSTER-Magnetoscop 1.068

Calibrazione strumento:val nominale 1.0035; valore misurato 1.0040

Fondo scala=1+0.003

Indeterminazione sulle misure= 1/10 f.s.=+/- 0.0003

Misure di permeabilità magnetica su AISI 316

Magnetic permeability meas. on AISI 316

num./rif.	spess. tot. (mm)	mu		f.s.
		min.	max.	
Misure a T ambiente **prima** della calibrazione dello strumento				
campione mu=1.021		1,019	1,020	*1,100*
campione mu=1.0035		1,0032	1,0035	*1,0100*
Noell	1	1,0029		*1,0100*
ASC	1	1,0010		*1,0030*
Precisinox AISI 316 ricotto sp.0.1	1	1,0010		*1,0030*
Precisinox AISI 316 ricotto sp.0.2	2	1,0010		*1,0030*
Precisinox AISI 316 ricotto sp.0.2	2	1,0008	1,0010	*1,0030*
Precisinox AISI 316 ricotto, dopo 3 cicli in azoto sp.0.2	2	1,0010		*1,0030*
AISI 316 ric. Precisinox				
Misure a T ambiente **dopo** la calibrazione dello strumento				
campione mu=1.021		1,021	1,022	*1,100*
campione mu=1.0035		1,0035	1,0038	*1,0100*
Precisinox AISI 316 ricotto sp.0.2	3	1,0021		*1,0030*

NOTE

Misure effettuate su più lamierini sovrapposti

Strumentazione: FOERSTER-Magnetoscope 1.068

Indeterminazione sulle misure= 1/10 f.s.

UDD-FIM département ISOLANTS

ATTESTATION DE CONFORMITE A LA COMMANDE
CERTIFICATE OF COMPLIANCE WITH THE ORDER
WERKSBESCHEINIGUNG

N° : 013197

EN 10204-2.1

Client Customer Kunde	152021 ANSALDO ENERGIA SPA VIA NICOLA LORENZI IT-16152 GENOVA ITALIE
Commande N° Order N° Bestellung Nr	BC 234572 — Date : 16/10/2000
Notre commande N° Our order N° Unsere Auftrags-Nr	128766/ 006

Désignation designation Bezeichnung	Référence ou type Reference or type Nummer oder Typ	Quantité Quantity Stückzahl	N° de série ou de lot Serial or batch number Serien oder Losnummer
BANDES G11 64170 BANDES G11 8000X15,6XEPAIS0,8	6 64175 0140046 99	40,00 P	

Nous certifions que la livraison est conforme aux stipulations de l'acceptation de la commande.
We certify, that the delivery complies with the terms of the order.
Es wird bestätigt, dass die Lieferung den Vereinbarungen bei der Bestellannahme entspricht.

Signature :
Unterschrift :

Date : 14/11/2000

UDD-FIM, S.A. - B.P. 49 - 90101 DELLE Cedex/France
Téléphone 03 84 36 84 36 - Télex 361 849 - Télécopie UDD 03 84 56 32 02
Capital 117 200 000 FRF, R.C. Belfort B 536 620 040, SIREN 536 620 040
N° ID. TVA FR20536620040

UDD-FIM département ISOLANTS

ATTESTATION DE CONFORMITE A LA COMMANDE
CERTIFICATE OF COMPLIANCE WITH THE ORDER
WERKSBESCHEINIGUNG

N° : 013138

EN 10204-2.1

Client Customer Kunde	152021 ANSALDO ENERGIA SPA VIA NICOLA LORENZI IT-16152 GENOVA ITALIE
Commande N° Order N° Bestellung Nr	BC 234572 — Date : 16/10/2000
Notre commande N° Our order N° Unsere Auftrags-Nr	128766/ 007

Désignation designation Bezeichnung	Référence ou type Reference or type Nummer oder Typ	Quantité Quantity Stückzahl	N° de série ou de lot Serial or batch number Serien oder Losnummer
BANDES G11 64170 BANDES G11 7000X15,6XEPAIS0,8	6 64175 0140045 99	40,00 P	

Nous certifions que la livraison est conforme aux stipulations de l'acceptation de la commande.
We certify, that the delivery complies with the terms of the order.
Es wird bestätigt, dass die Lieferung den Vereinbarungen bei der Bestellannahme entspricht.

Signature :
Unterschrift :

Date : 14/11/2000

UDD-FIM, S.A. - B.P. 49 - 90101 DELLE Cedex/France
Téléphone 03 84 36 84 36 - Télex 361 849 - Télécopie UDD 03 84 56 32 02
Capital 117 200 000 FRF, R.C. Belfort B 536 620 040, SIREN 536 620 040
N° ID. TVA FR20536620040

PRECISINOX S.R.L.

CERTIFICATO N° 6710/02

CERTIFICATO DI ANALISI PERCENTUALE DEL MATERIALE CONSEGNATOVI CON NOSTRO D.D.T. N° 409 DEL 19/03/02

Vs. ordine n°496 del 01/03/02

NASTRO ACCIAIO AISI 316/L RICOTTO DIMENSIONI mm 0,20x15,6 bordi s.vati

Codice collaudo: 11110

C	=	0.017
Si	=	0.585
Mn	=	1.550
P	=	0.026
S	=	0.003
Cr	=	16.688
Ni	=	10.195
Mo	=	2.064

R ≅ 618 N/mm2

COLATA N° 063896

LOTTO N° 23071B

Zingonia, 20 marzo 2002

PRECISINOX S.R.L.

Dalmine

CERTIFICATO DI COLLAUDO

(UNI EN 10204 3.1.B)

N. 00/10070

Pagina 1

RIF.ORD. CLIENTE 201573

COMMESSA / POS. 4791596/010

TUBI DI QUALITA' S.R.L.

P.ZA CADUTI 6 LUGLIO 1944
24044 DALMINE BG

PRODOTTO TUBI S.S. DI QUALITA' FINITI A FREDDO PER CILINDRI OLEODINAMICI NORMA DIN 2391/C E CAPITOLATO DALMINE STQ/SDF 114/1 REV.6 SERIE DL ACCIAIO ST 52 DIN 2391 TRATTAMENTO TERMICO DI DISTENSIONE OLEATI CON PT 7 LISCI ALLE ESTREMITA'

DIMENSIONI:	Lgh. Da	Lgh. A	D.E. mm	SP mm
	6500	8500	80,000	5,000

QUANTITA': Nr 106 Mt 848,29 Kg 8042 Ft 2783' 1" Lbs 17729,5

PROVA N. W3287 COLATA N. 902814

TRAZIONE + 20,0^C

PROVETTA	: LONGITUDINALE			SEZIONE	65,4 mm2
SNERVAMENTO 0,2%	(MPA):	rich. min	520	ottenuto	658,0
ROTTURA	(MPA):	rich. min	600	ottenuto	757,0
ALLUNGAMENTO	:	CALIBRATA SU 5D	45,0 mm		
	(%):	rich. min	14,0	ottenuto	19,3

COLATA N. 902814

ANALISI CHIMICA % DI COLATA

C	Mn	Si	P	S	Ti
0,19	1,43	0,28	0,012	0,002	0,016

Nb 0,003 V 0,008

(Nb+V +Ti) = 0,027

IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE

Il presente certificato è valido per:

- CLIENTE TMS spa
- ORDINE N. VS N. FAX 690/01
- BOLLA 3565 DEL 5/12/01 Kg 6611

VALLESTURA TUBI

D A T A 26/09/2000

DALMINE Spa

IL CAPO DEL REPARTO COLLAUDO
Maurizio DI PIETRA

Fine

VALLESTURA SPA TUBI ACCIAIO P.O.
Job N. VM 317332 2001 Pos.00002 NR 0 MT 100,97 KG 2251,00
Heat/Colata N. 910751 Delivery/bolla 18695 To/del 11/09/01

Dalmine
24044 DALMINE (BG) P.Caduti 6 luglio 1944, 1
Telefono 0039 35 560111 - Fax 0039 35 560033
Internet site : www.dalmine.it
Stab./Mill ARCORE (IT)

CERTIFICATO DI COLLAUDO
INSPECTION CERTIFICATE
(UNI EN 10204 3.1.B)

N./N. 01/02975 Pagina/Page 001/002
Data/Date 19/02/2001

DST www.dst.com

Cliente/Customer: TUBI DI QUALITA' S.R.L.	Rifer. Ordine Cl./Customer's order: C202000AT2039750000100000	Posiz. Cliente/Customer's Refer.:
Indirizzo/Address: P.ZA CADUTI 6 LUGLIO 1944 — Località/Town: 24044 DALMINE BG	Stato/Country: ITALIA	Conferma / Posiz./Mill order: 3792712/030
		Riferimento EXP/EXP Reference:
		Avviso di spedizione/Shipping note: 084185 - 16/02/2001

Prodotto/Product:
TUBI S.S. TAM NORMA DIN 1629 ACCIAIO ST 52.0 DIN 1629 GREZZI LISCI ALLE ESTREMITA'
SEAMLESS HOT ROLLED STEEL PIPES ACCORDING TO DIN 1629, IN STEEL ST 52.0, BLACK, WITH PLAIN ENDS

Dimensioni/Dimensions:

Lgh Da/Lg From	Lgh A/Lg To	D.E. mm/O.D. mm	SP mm/W.T. mm	Pezzi/Pieces	Metri/M	Chili/Kg	Feet/Feet	Libre/Lb
8900	11200	121,000	8,000	14	134,13	2972	440' 1"	6552,1

PROVA DI TRAZIONE/TENSILE TEST

Prova/Test	Colata/Heat	°C	T	L/T	Tipo/Type	Dimensioni/Dimensions		Sez./Sec. mm²	Rs %	Rs Min. N/MM2	Rs Max. N/MM2	Rm Min. N/MM2	Rm Max. N/MM2	Cal.	mm.	Min.	Ott./Obt.
									0,20	355		500	650				
C5132	910751	+ 20		L	Rec	16,10	8,60	138,5		396,0		600,0		5D	65,0	21,0	23,1

T = 1:DOPO P.W.H.T./AFTER P.W.H.T.
2:DOPO 'STRAIN AGEING'/AFTER 'STRAIN AGEING'
3:DOPO P.W.H.T.+DOPO 'STRAIN AGEING'/AFTER P.W.H.T.+AFTER 'STRAIN AGEING'
L/T = L:LONGITUDINALE/LONGITUDINAL
T:TRASVERSALE/TRANSVERSE
Tipo = Rec:RETTANGOLARE/RECTANGULAR
Ssp:STRISCIA TUBOLARE/TUBULAR STRIP
Cil:CILINDRICA/ROUND
Tu:TUBOLARE/TUBULAR

PROVE TECNOL./TECHNOL.TESTS

Prova/Test	Col./Heat	T	Manicott./Flaring exp.Test E	Q	Num.
			1	2	1
C5132	910751		Esito ok/Test ok		

T = 1:DOPO P.W.H.T./AFTER P.W.H.T.
2:DOPO 'STRAIN AGEING'/AFTER 'STRAIN AGEING'
3:DOPO P.W.H.T.+DOPO 'STRAIN AGEING'/AFTER P.W.H.T.+AFTER 'STRAIN AGEING'
E = 1:AD UNA ESTREMITA'/AT ONE END
2:ALLE 2 ESTREMITA'/AT BOTH ENDS
Q = 1:TUTTI I TUBI/EACH PIPE
2:'n' TUBI PER LOTTO/'n' PIPE OF THE LOT
3:'%' TUBI PER LOTTO/'%' PIPE OF THE LOT

ANALISI CHIMICHE/CHEMICAL ANALYSIS

			C x100	Si	Mn	P x1000	S	Al x1000
Colata Heat	H	Max	22	55	160	40	35	40
		Min						20
910751	C		18	31	140	14	3	31

PROVA DI TENUTA/LEAK TEST

Tipo/Type	U.M.	Sec.	Valore/Value
CND/NDT	BAR	5	50,0

IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT

L'ACCIAIO E' DI TIPO CALMATO PRODOTTO AL FORNO ELETTRICO
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACS

Il presente certificato è valido per:

— CLIENTE TMS SRL
— ORDINE N. VS N. FAX 690/01
— BOLLA 3565 Kg#1344
DEL 5/12/01

VALLESTURA TUBI

Dalmine

24044 DALMINE (BG) P. Caduti 6 luglio 1944, 1
Stab./Mill ARCORE (I1)

CERTIFICATO DI COLLAUDO
INSPECTION CERTIFICATE
(UNI EN 10204 3.1.B)

N./Nr. 01/02975 Pagina/Page 002/002
Data/Date 19/02/2001

www.dst.com

Cliente/Customer: TUBI DI QUALITA' S.R.L.
Indirizzo/Address: P.ZA CADUTI 6 LUGLIO 1944
Località/Town: 24044 DALMINE BG
Stato/Country: ITALIA
Rifer. Ordine Cli./Customer's order: C202000AT2039750000100000
Posiz. Cliente/Customer's Refer.:
Riferimento EXP/EXP Reference:
Commessa / Posiz./Mill order: 3792712/030
Avviso di spedizione/Shipping Note: 084185 - 16/02/2001

Prodotto/Product:
TUBI S.S. TAM NORMA DIN 1629 ACCIAIO ST 52.0 DIN 1629 GREZZI LISCI ALLE ESTREMITA'
SEAMLESS HOT ROLLED STEEL PIPES ACCORDING TO DIN 1629, IN STEEL ST 52.0, BLACK, WITH PLAIN ENDS

Dimensioni/Dimensions:

Lgh. Da/Lg. From	Lgh. A/Lg. To	DE mm/O.D. mm	SP mm/W.T. mm	Pezzi/Pieces	Metri/M	Chili/Kg	Feet/Feet	Libre/Lb
8900	11200	121,000	8,000	14	134,13	2972	440' 1"	6552,1

FIRME/SIGNATURE

IL CAPO DEL REPARTO COLLAUDO
CHIEF OF INSPECTION DPT
Marco BRAMBILLA

PALINI E BERTOLI S.p.A.

Via E.Fermi 28 33058 SAN GIORGIO DI NOGARO (UD) -ITALY- Tel.0039/0431/621111 Fax. 0039/0431/621244 Cod.Fisc. 12891400157 - Part.IVA 02127490304
CAP.SOC. 32.500.000.000 INT.VERSATO SEDE LEGALE: Via E. Fermi, 28 33058 San Giorgio di Nogaro (Udine) - REGISTRO IMPRESE UDINE n° 8286/2000

CERTIFICATO DI COLLAUDO / INSPECTION CERTIFICATE (EN 10204 3.1.B / DIN 50049 3.1.B)

Fgl.Car. 54.657

Certificato Nn / Data : 50.767 - 20-Mar-2002
Cliente / Customer... : EUSIDER SIDERURGICA SPA - (Ind./ Address) » VIA CARROCCIO,8
CAP, Città / Town.... : 20123 MILANO Pv. MI
Bolla Nm. / Del-Of... : (1.953) 20-Mar-2002
Cliente/Customer Ord. : (627/2002-7435-V1°)
Standard..... : EN 10025

Stato di Fornitura / State of Supply : NATURALE DI LAMINAZIONE / AS ROLLED

Qualità Quality	ID.Placca ID.Plate	Dimensioni Dimension mm.	Col./Lotto Heat/Lot	Provino Test	ANALISI CHIMICA / CHEMICAL ANALYSIS %C	%Si	%Mn	%P	%S	%Cr	%Ni	%Cu	%Al	%Mo	%Nb	%V	%N	CEQ.	CARATT.MECCANICHE/MECHANICAL TEST- Rm/Rt N/mm2	ReH/y N/mm2	A %	KV °C	1ª J	2ª J	3ª J
S275JR...	9G.1327.02.....	20x2500x12000...	220815/A0..	CB6547	0,180	0,210	0,960	0,017	0,015	.....	.....	.....	0,033	.....	.....	.....	.....	.....	...466	...313	..32,0	...	...	...	...
S275JR...	9G.1329.01.....	20x2500x12000...	120849/AA..	.....	0,180	0,210	0,920	0,018	0,017	.....	.....	.....	0,032	.....	.....	.....	.....	.....	...473	...305	..31,1	...	...	...	...
S275JR...	9G.1331.04.....	20x2500x12000...	120849/AA..	.....	0,180	0,210	0,920	0,018	0,017	.....	.....	.....	0,032	.....	.....	.....	.....	.....	...473	...305	..31,1	...	...	...	...
S275JR...	9G.1333.01.....	20x2500x12000...	220814/AA..	.....	0,180	0,210	0,920	0,018	0,018	.....	.....	.....	0,032	.....	.....	.....	.....	.....	...473	...305	..31,1	...	...	...	...
S275JR...	9G.1284.02/A...	12x2500x12000...	220802/AB..	CB6473	0,170	0,240	1,000	0,017	0,015	.....	.....	.....	0,039	.....	.....	.....	.....	.....	...469	...325	..31,5	...	...	...	...
S275JR...	9G.1284.02/B...	12x2500x12000...	220802/AB..	CB6473	0,170	0,240	1,000	0,017	0,015	.....	.....	.....	0,039	.....	.....	.....	.....	.....	...469	...325	..31,5	...	...	...	...
S275JR...	9G.1284.03/B...	12x2500x12000...	220802/AB..	.....	0,170	0,240	1,000	0,017	0,015	.....	.....	.....	0,039	.....	.....	.....	.....	.....	...469	...325	..31,5	...	...	...	...

CERTIFICHIAMO CHE IL PRODOTTO SOPRA ELENCATO E' CONFORME ALLA PRESCRIZIONE DELL'ORDINE E CHE I CONTROLLI DELL'ASPETTO SUPERFICIALE E DIMENSIONALE HANNO DATO ESITO POSITIVO.
WE PALINI & BERTOLI HEREBY CERTIFY THAT THE ABOVE MENTIONED PRODUCTS ARE IN COMPLIANCE WITH ORDER PRESCRIPTIONS AND THAT TESTS OF SURFACE AND DIMENSIONAL ASPECTS WERE SUCCESFUL.

QUALITY CONTROL

Cert.Nm. : 50.767
Pag. Nm. : 1
Rapp.268

p.c. POBOLLE

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Quench Heaters	HCMB__A025-		10004604	10004604 M021
Quench Heaters	HCMB__A025-		10004860	10004860
Quench Heaters	HCMB__A025-		10004867	10004867 M021
Quench Heaters	HCMB__A025-		10004868	10004868
Quench Heaters	HCMB__A025-		10004869	10004869
Quench Heaters	HCMB__A025-		10004871	10004871 M015
Quench Heaters	HCMB__A025-		10004873	10004873 M020
Quench Heaters	HCMB__A025-		10004880	10004880 M021
	-			
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** F. BOURGEOIS
Tel. 00 41 22 767 20 41
E-mail. Francois.Bourgeois@cern.ch

9. ***Reference specification:*** LHC-DQH-CI-001 Rev.1

10. ***Reference drawings:*** LHCMB_A0125 Rev. A ; LHCMB_A0124 Rev. B

11. ***Part manufactured by:*** AXON

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Dwlivered quantity : 23 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
08 – 04- 2002	F. Bourgeois	

axon' CABLE & INTERCONNECTIQUE

CERN

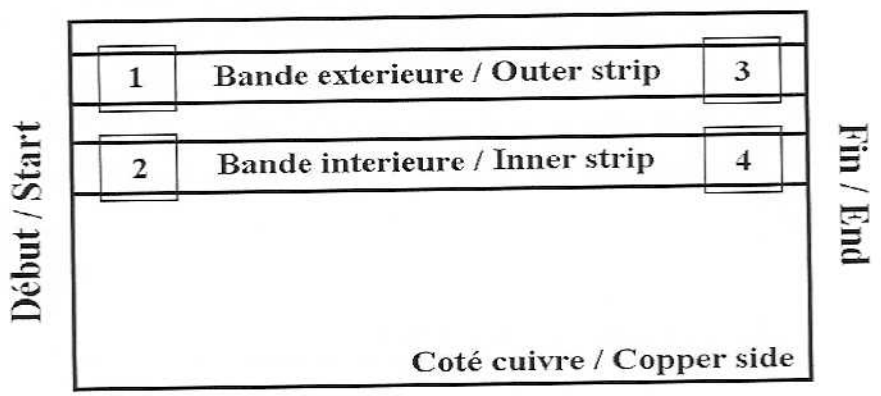
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004604

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/009 I/S			
Spool polymide number	2608 I/P N°9562 39 et 40			
ate of control	12/06/01			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	23		12/07/01	FD
Hygrometry	%	34		12/07/01	FD
Length	14557+-2mm	14,557		12/07/01	FD
Width at start	102.45+-0.15mm	102.57		12/07/01	FD
Width at end	102.45+-0.15mm	102.56		12/07/01	FD
Thickness on insulation start / end	0.20+-0.01mm	0.196	0.201	12/07/01	FD
Thickness on outer strip start / end	0.22+-0.02mm	0.234	0.221	12/07/01	FD
Thickness on inner strip start / end	0.22+-0.02mm	0.224	0.226	12/07/01	FD
Resistance of outer strip	Ohm	9.79		23/07/01	FD CM
Resistance of inner strip	Ohm	9.78		23/07/01	FD CM
Outer strip margin at start	5.7+-0.5mm	5.76		12/07/01	FD
Outer strip margin at end	5.7+-0.5mm	5.84		12/07/01	FD
nner strip margin at start	29.95+-1mm	29.85		12/07/01	FD
nner strip margin at end	29.95+-1mm	29.99		12/07/01	FD
Dielectric test at 3kV		OK		23/07/01	FD CM
Positions and dimensions of the four windows **		OK		19/07/01	VDS
Perpendicularities start and end		0.20	0.21	12/07/01	FD
Visual inspection		OK		12/07/01	FD



** conform to tolerances (0,95 mm +/- 0,45 mm) approved by Mr Rodriguez the 28/07/00

axon' CABLE & INTERCONNECTIQUE

CERN

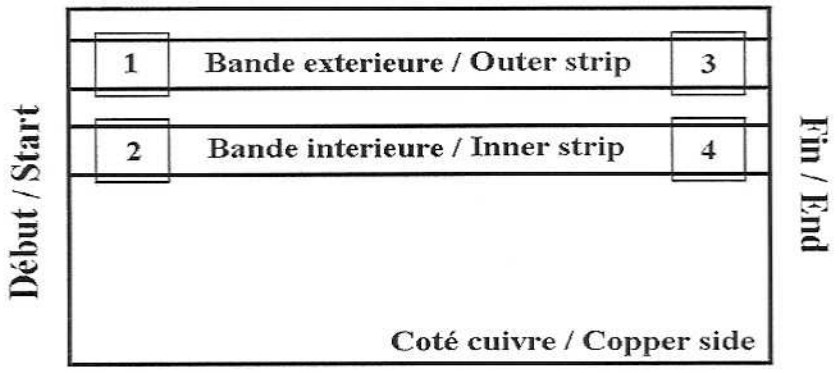
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004867

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/024 A I et S			
Spool polymide number	14761 I/P1041-6 B 23 et 24			
Date of control	7/24/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	23		9/7/2001	VP
Hygrometry	%	35		9/7/2001	VP
Length	14557+-2mm	14,557		9/7/2001	VP
Width at start	102.45+-0.15mm	102.39		9/7/2001	VP
Width at end	102.45+-0.15mm	102.38		9/7/2001	VP
Thickness on insulation start / end	0.20+-0.01mm	0.198	0.201	9/7/2001	VP
Thickness on outer strip start / end	0.22+-0.02mm	0.230	0.237	9/7/2001	VP
Thickness on inner strip start / end	0.22+-0.02mm	0.231	0.235	9/7/2001	VP
Resistance of outer strip	Ohm	9.90		9/21/2001	SR
Resistance of inner strip	Ohm	9.70		9/21/2001	SR
Outer strip margin at start	5.7+-0.5mm	5.74		9/7/2001	VP
Outer strip margin at end	5.7+-0.5mm	5.78		9/7/2001	VP
Inner strip margin at start	29.95+-1mm	29.77		9/7/2001	VP
Inner strip margin at end	29.95+-1mm	29.79		9/7/2001	VP
Dielectric test at 3kV		OK		9/21/2001	SR
Positions and dimensions of the four windows **		OK		9/19/2001	LG
Perpendicularities start and end		0.04	0.26	9/7/2001	VP
Visual inspection		OK		9/7/2001	VP



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

axon' CABLE & INTERCONNECTIQUE

CERN

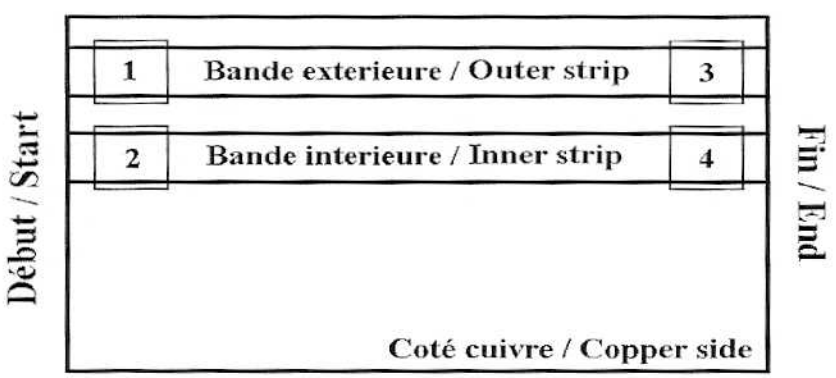
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004880

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/024A I et S			
Spool polymide number	14761 I/P1041-6 B 25 et 26			
Date of control	7/25/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	22		9/11/2001	VP
Hygrometry	%	34		9/11/2001	VP
Length	14557+-2mm	14,557		9/11/2001	VP
Width at start	102.45+-0.15mm		102.51	9/11/2001	VP
Width at end	102.45+-0.15mm		102.52	9/11/2001	VP
Thickness on insulation start / end	0.20+-0.01mm	0.207	0.202	9/11/2001	VP
Thickness on outer strip start / end	0.22+-0.02mm	0.230	0.231	9/11/2001	VP
Thickness on inner strip start / end	0.22+-0.02mm	0.229	0.233	9/11/2001	VP
Resistance of outer strip	Ohm	10.10		9/21/2001	SR
Resistance of inner strip	Ohm	9.90		9/21/2001	SR
Outer strip margin at start	5.7+-0.5mm	5.75		9/11/2001	VP
Outer strip margin at end	5.7+-0.5mm	5.76		9/11/2001	VP
Inner strip margin at start	29.95+-1mm	29.76		9/11/2001	VP
Inner strip margin at end	29.95+-1mm	29.73		9/11/2001	VP
Dielectric test at 3kV		OK		9/21/2001	SR
Positions and dimensions of the four windows **		OK		9/19/2001	LG
Perpendicularities start and end		0.14	0.31	9/11/2001	VP
Visual inspection		OK		9/11/2001	VP



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Quench Heaters	HCMB__A025	-	10004881	10004881 M021
Quench Heaters	HCMB__A025	-	10004882	10004882 M015
Quench Heaters	HCMB__A025	-	10004883	10004883
Quench Heaters	HCMB__A025	-	10004884	10004884 M020
Quench Heaters	HCMB__A025	-	10004888	10004888 M020
Quench Heaters	HCMB__A025	-	10004889	10004889 M021
Quench Heaters	HCMB__A025	-	10004894	10004894 M015
Quench Heaters	HCMB__A025	-	10004896	10004896
		-		
		-		

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** F. BOURGEOIS
Tel. 00 41 22 767 20 41
E-mail. Francois.Bourgeois@cern.ch

9. ***Reference specification:*** LHC-DQH-CI-001 Rev.1

10. ***Reference drawings:*** LHCMB_A0125 Rev. A ; LHCMB_A0124 Rev. B

11. ***Part manufactured by:*** AXON

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Dwlivered quantity : 24 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
08 – 04- 2002	F. Bourgeois	

axon' CABLE & INTERCONNECTIQUE

CERN

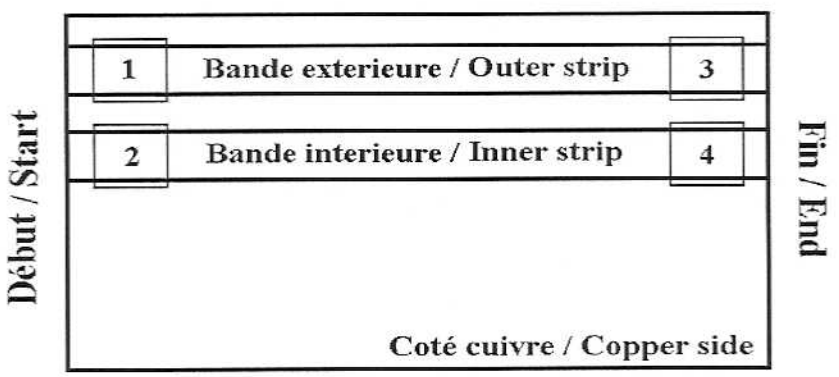
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004881

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/024A I et S			
Spool polymide number	14761 I/P1041-6 B 25 et 26			
Date of control	7/25/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	22		9/11/2001	VP
Hygrometry	%	34		9/11/2001	VP
Length	14557+-2mm	14,557		9/11/2001	VP
Width at start	102.45+-0.15mm		102.53	9/11/2001	VP
Width at end	102.45+-0.15mm		102.51	9/11/2001	VP
Thickness on insulation start / end	0.20+-0.01mm	0.203	0.202	9/11/2001	VP
Thickness on outer strip start / end	0.22+-0.02mm	0.231	0.233	9/11/2001	VP
Thickness on inner strip start / end	0.22+-0.02mm	0.230	0.234	9/11/2001	VP
Resistance of outer strip	Ohm	10.10		9/21/2001	SR
Resistance of inner strip	Ohm	9.80		9/21/2001	SR
Outer strip margin at start	5.7+-0.5mm	5.75		9/11/2001	VP
Outer strip margin at end	5.7+-0.5mm	5.71		9/11/2001	VP
Inner strip margin at start	29.95+-1mm	29.75		9/11/2001	VP
Inner strip margin at end	29.95+-1mm	29.79		9/11/2001	VP
Dielectric test at 3kV		OK		9/21/2001	SR
Positions and dimensions of the four windows **		OK		9/20/2001	LG
Perpendicularities start and end		0.22	0.2	9/11/2001	VP
Visual inspection		OK		9/11/2001	VP



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

axon' CABLE & INTERCONNECTIQUE

CERN

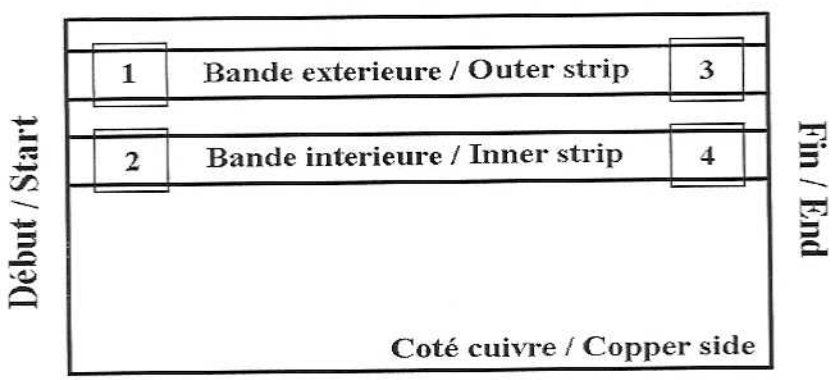
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004889

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/027A I et S			
Spool polymide number	14761 I/P1041-8 B 33 et 34			
Date of control	7/26/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	22		9/11/2001	VP
Hygrometry	%	35		9/11/2001	VP
Length	14557+-2mm	14,557		9/11/2001	VP
Width at start	102.45+-0.15mm	102.49		9/11/2001	VP
Width at end	102.45+-0.15mm	102.46		9/11/2001	VP
Thickness on insulation start / end	0.20+-0.01mm	0.199	0.194	9/11/2001	VP
Thickness on outer strip start / end	0.22+-0.02mm	0.228	0.225	9/11/2001	VP
Thickness on inner strip start / end	0.22+-0.02mm	0.227	0.221	9/11/2001	VP
Resistance of outer strip	Ohm	10.30		9/21/2001	SR
Resistance of inner strip	Ohm	10.20		9/21/2001	SR
Outer strip margin at start	5.7+-0.5mm	5.90		9/11/2001	VP
Outer strip margin at end	5.7+-0.5mm	5.91		9/11/2001	VP
Inner strip margin at start	29.95+-1mm	29.97		9/11/2001	VP
Inner strip margin at end	29.95+-1mm	29.94		9/11/2001	VP
Dielectric test at 3kV		OK		9/21/2001	SR
Positions and dimensions of the four windows **		OK		9/20/2001	LG
Perpendicularities start and end		0.03	0.16	9/11/2001	VP
Visual inspection		OK		9/11/2001	VP



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Quench Heaters	HCMB__A025	-	10004899	10004899 M021
Quench Heaters	HCMB__A025	-	10004909	10004909 M021
Quench Heaters	HCMB__A025	-	10004910	10004910 M020
Quench Heaters	HCMB__A025	-	10004912	10004912 M015
Quench Heaters	HCMB__A025	-	10004916	10004916 M015
Quench Heaters	HCMB__A025	-	10004917	10004917 M015
Quench Heaters	HCMB__A025	-	10004919	10004919 M015
Quench Heaters	HCMB__A025	-	10004922	10004922 M021
	-			
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** F. BOURGEOIS
Tel. 00 41 22 767 20 41
E-mail. Francois.Bourgeois@cern.ch

9. ***Reference specification:*** LHC-DQH-CI-001 Rev.1

10. ***Reference drawings:*** LHCMB_A0125 Rev. A ; LHCMB_A0124 Rev. B

11. ***Part manufactured by:*** AXON

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Dwlivered quantity : 25 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
08 – 04- 2002	F. Bourgeois	

axon' CABLE & INTERCONNECTIQUE

CERN

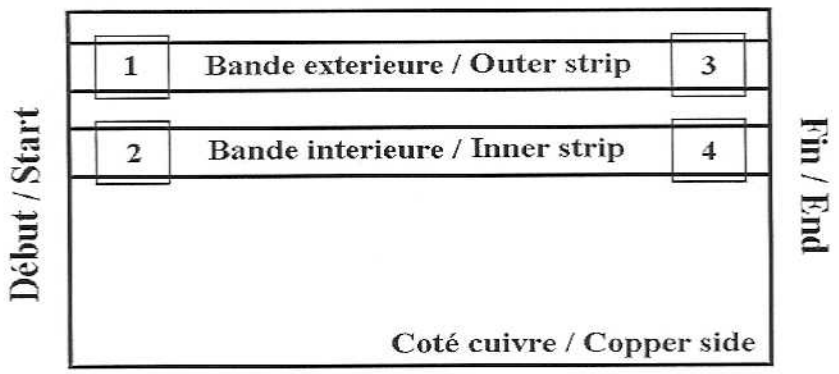
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004899

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/028A I et S			
Spool polymide number	014761 I/P10418 B 35 et 36			
Date of control	7/27/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	20		9/19/2001	VP
Hygrometry	%	34		9/19/2001	VP
Length	14557+-2mm	14,557		9/19/2001	VP
Width at start	102.45+-0.15mm	102.51		9/19/2001	VP
Width at end	102.45+-0.15mm	102.5		9/19/2001	VP
Thickness on insulation start / end	0.20+-0.01mm	0.198	0.195	9/19/2001	VP
Thickness on outer strip start / end	0.22+-0.02mm	0.229	0.226	9/19/2001	VP
Thickness on inner strip start / end	0.22+-0.02mm	0.228	0.227	9/19/2001	VP
Resistance of outer strip	Ohm	9.90		10/3/2001	VP
Resistance of inner strip	Ohm	10.20		10/3/2001	VP
Outer strip margin at start	5.7+-0.5mm	5.89		9/19/2001	VP
Outer strip margin at end	5.7+-0.5mm	5.91		9/19/2001	VP
Inner strip margin at start	29.95+-1mm	30.01		9/19/2001	VP
Inner strip margin at end	29.95+-1mm	30.00		9/19/2001	VP
Dielectric test at 3kV		OK		10/3/2001	VP
Positions and dimensions of the four windows **		OK		9/28/2001	LG
Perpendicularities start and end		0.08	0.032	9/19/2001	VP
Visual inspection		OK		9/19/2001	VP



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

axon' CABLE & INTERCONNECTIQUE

CERN

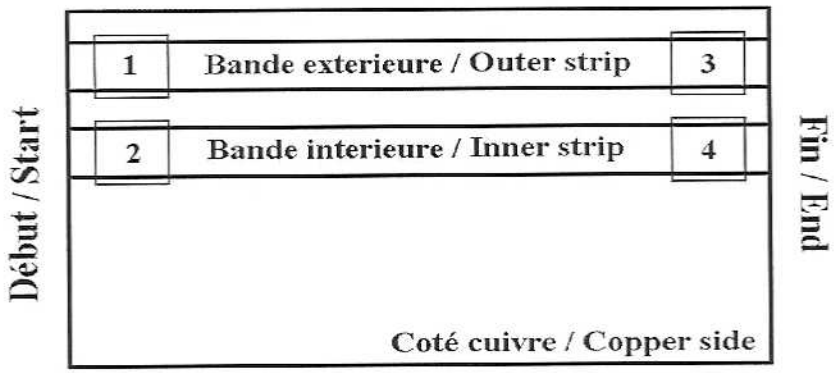
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004909

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/028 A I et S			
Spool polymide number	014761 I/P10418 B 37 et 38			
Date of control	7/27/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	20		9/19/2001	SR
Hygrometry	%	34		9/19/2001	SR
Length	14557+-2mm	14,557		9/19/2001	SR
Width at start	102.45+-0.15mm		102.4	9/19/2001	SR
Width at end	102.45+-0.15mm		102.41	9/19/2001	SR
Thickness on insulation start / end	0.20+-0.01mm	0.198	0.193	9/19/2001	SR
Thickness on outer strip start / end	0.22+-0.02mm	0.230	0.222	9/19/2001	SR
Thickness on inner strip start / end	0.22+-0.02mm	0.232	0.223	9/19/2001	SR
Resistance of outer strip	Ohm	10.20		10/4/2001	VP
Resistance of inner strip	Ohm	10.00		10/4/2001	VP
Outer strip margin at start	5.7+-0.5mm	5.69		9/19/2001	SR
Outer strip margin at end	5.7+-0.5mm	5.71		9/19/2001	SR
Inner strip margin at start	29.95+-1mm	29.79		9/19/2001	SR
Inner strip margin at end	29.95+-1mm	29.73		9/19/2001	SR
Dielectric test at 3kV		OK		10/4/2001	VP
Positions and dimensions of the four windows **		OK		9/28/2001	LG
Perpendicularities start and end		0.10	0.25	9/19/2001	SR
Visual inspection		OK		9/19/2001	SR



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

axon' CABLE & INTERCONNECTIQUE

CERN

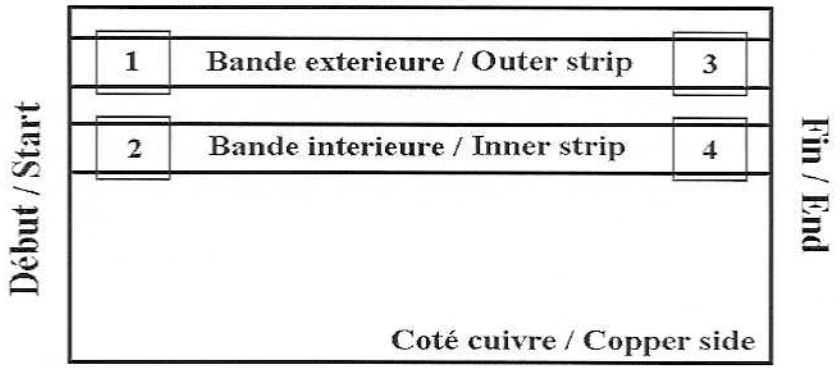
TRAVELLER

VERSION 2 (August 2000)

HCMB-A025-10004922

Dipole Magnet Identification				
Customer	CERN			
CERN order number				
AXON' order number	11013611			
CERN Specification number	LHC-DQH-CI-0001 Rev. 1			
AXON' part-number	P517776B			
Production batch number	D30347			
Spool conductor number	011919 01/030 B I et S			
Spool polymide number	014761 I/P10567 B 3 et 4			
Date of control	7/31/2001			
Conformity	**YES**	X	**NO**	

CHECKS		Measured values (from/to)		Date	Initials
Temperature	° C	23		9/24/2001	SR
Hygrometry	%	37		9/24/2001	SR
Length	14557+-2mm	14,557		9/24/2001	SR
Width at start	102.45+-0.15mm		102.43	9/24/2001	SR
Width at end	102.45+-0.15mm		102.41	9/24/2001	SR
Thickness on insulation start / end	0.20+-0.01mm	0.199	0.197	9/24/2001	SR
Thickness on outer strip start / end	0.22+-0.02mm	0.229	0.232	9/24/2001	SR
Thickness on inner strip start / end	0.22+-0.02mm	0.228	0.230	9/24/2001	SR
Resistance of outer strip	Ohm	10.10		10/2/2001	VP
Resistance of inner strip	Ohm	10.30		10/2/2001	VP
Outer strip margin at start	5.7+-0.5mm	5.88		9/24/2001	SR
Outer strip margin at end	5.7+-0.5mm	5.90		9/24/2001	SR
Inner strip margin at start	29.95+-1mm	30.48		9/24/2001	SR
Inner strip margin at end	29.95+-1mm	30.84		9/24/2001	SR
Dielectric test at 3kV		OK		10/2/2001	VP
Positions and dimensions of the four windows **		OK		9/28/2001	LG
Perpendicularities start and end		0.17	0.08	9/24/2001	SR
Visual inspection		OK		9/24/2001	SR



** conform to tolerances (1.0 mm +/- 0,5 mm) approved by Mr F.Bourgeois the 24/07/0

Quality contacts :Pierre Castets phone N° 00-33-3-26-81-70-81 or Francois Lebourcq phone N° 00-33-3-26-81-70-82

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Collar A type 1	HCMB_ _ A099	-	MAL20059	Batch N° MAL20059
Collar A type 2	HCMB_ _ A100	-	MAL20059	
Collar B type 1	HCMB_ _ A102	-	MAL20059	
Collar B type 2	HCMB_ _ A103	-	MAL20059	
Collar C type 1	HCMB_ _ A105	-	MAL20059	
Collar C type 2	HCMB_ _ A106	-	MAL20059	
	-			
	-			

6. ***Recipient contractor:***	ANSALDO ENERGIA S.P.A.		
7. ***Contract / Order No :***	F-302/LHC/LHC		
8. ***Responsible person at CERN:***	Aniello RUSSO	***Tel.***	00 41 22 767 2977
		E-mail.	Aniello.Russo@cern.ch
9. ***Reference specification:***	LHC-MB_A-C1-0018		
10. ***Reference drawings:***	LHCMB_ _A0099 Rev. B, LHCMB_ _A0100 Rev. B, LHCMB_ _A0102 Rev. A, LHCMB_ _A0103 Rev. A, LHCMB_ _A0105 Rev. A, LHCMB_ _A0106 Rev. A.		
11. ***Part manufactured by:***	Ernesto Malvestiti s.p.a (IT)		
12. ***Acceptance test refs:***	See attachment paper		
13. ***Acceptance test results:***	Conform to Technical Specification		
14. ***Comments:***	Total batches delivered including this one = 14 Collars delivered 04/03/2002 From MALVESTITI to ANSALDO		

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
27 – 03 - 2002	Aniello RUSSO	A Russo

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Switzerland

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LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Copper Wedge, Type 1	HCMB_ _ A177	-		Batch N° 14
Copper Wedge, Type 2	HCMB_ _ A178	-		Batch N° 14
Copper Wedge, Type 3	HCMB_ _ A179	-		Batch N° 14
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor:*** ANSALDO ENERGIA S.P.A.

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Diego Perini — ***Tel.*** 00 41 22 767 23 47 — ***E-mail.*** Diego.Perini@cern.ch

9. ***Reference specification:*** LHC-MB_A-C1-0016

10. ***Reference drawings:*** LHCMB__A0152 IND. A, LHCMB__A0154 IND. A, LHCMB__A0156 IND. A

11. ***Part manufactured by:*** OUTOKUMPU

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Quantity delivered : 21 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
06 – 02 - 2002	Diego Perini	

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the **Large Hadron Collider** project

LHC Project Document No.
LHC-MB
CERN Div./Group or Supplier/Contractor Document No.
MB
EDMS Document No

Certificate of Conformity
for CERN Delivered Components

Delivery composition

Part name	***Part ID***	*In the Delivery*	*Number of delivered sets if present in the delivery*
Inner layer sets	HCMB_A0180 to 189	**X**	**40**
Outer layer sets	HCMB_A0077 to 83 plus 88	**NO**	**-**

Delivery To:	Ansaldo Energia		
Expedition date :	15/06/2002		
Serial No. / Batch production No.:	Tosti 49,50		
Manufacturer:	Tosti SAS		
Contract / Order No.:	CD/1000506		
Comment on delivery:	Delivered 28 of 30		
Responsible person at CERN:	Paolo Fessia	***Tel.***	00 41 22 767 3291
		E-mail.	Paolo.Fessia@cern.ch
Responsible person at the producer of this delivery:	Giuseppe Franceschelli	***Tel.***	00 39 0564 955358
		E-mail.	Tostisas@tin.it
Related tech. Specification:	LHC-MMS/98-198 rev. 1.1 (EDMS No. 107759)		
End spacer tech. Specification	LHC-MMS/99-209 (IT-2615) (EDMS No. 108110)		
Related drawings:	LHCMB_A0180 to 189 and LHCMB_A076 to 83 plus 88. Find the detailed list attached		
Raw material producer	Isola Composites		
Ref. N. of the raw material order.	07018.91.200		
Acceptance test references:	Measurements with gauges performed at Tosti's premises		
Acceptance test results:	**CONFORM (dimensions are in the indicated tolerances)**		
Notes	NEW GENERATION !		

CERN certifies that the delivered material is conform to the technical specification mentioned above and that the material can be shipped to the CMA.

Date:	***Name:***	***Signature***
2002-06-12	Cuzin Simon	

ERN
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Switzerland

the
Large Hadron Collider
project

LHC Project Document No.
LHC-MB
CERN Div./Group or Supplier/Contractor Document No.
MB
EDMS Document No

Certificate of Conformity
for CERN Delivered Components

Delivery composition

Part name	***Part ID***	*In the Delivery*	*Number of delivered sets if present in the delivery*
Inner layer sets	HCMB_A0180 to 189	**NO**	**-**
Outer layer sets	HCMB_A0076 to 83 plus 88	**x**	**40**

Delivery To:	Ansaldo Energia		
Expedition date :	15/06/2002		
Serial No. / Batch production No.:	Tosti 47,48,51,52		
Manufacturer:	Tosti SAS		
Contract / Order No.:	CD/1000506		
Comment on delivery:	Delivered 30 of 30		
Responsible person at CERN:	Paolo Fessia	***Tel.***	00 41 22 767 3291
		E-mail.	Paolo.Fessia@cern.ch
Responsible person at the producer of this delivery:	Giuseppe Franceschelli	***Tel.***	00 39 0564 955358
		E-mail.	Tostisas@tin.it
Related tech. Specification:	LHC-MMS/98-198 rev. 1.1 (EDMS No. 107759)		
End spacer tech. Specification	LHC-MMS/99-209 (IT-2615) (EDMS No. 108110)		
Related drawings:	LHCMB_A0180 to 189 and LHCMB_A076 to 83 plus 88. Find the detailed list attached		
Raw material producer	Isola Composites		
Ref. N. of the raw material order.	07018.91.200		
Acceptance test references:	Measurements with gauges performed at Tosti's premises		
Acceptance test results:	**CONFORM (dimensions are in the indicated tolerances)**		
Notes	The pieces 79 and 82 are at the final lenght		

CERN certifies that the delivered material is conform to the technical specification mentioned above and that the material can be shipped to the CMA.

Date:	***Name:***	***Signature***
2002-06-12	Cuzin Simon	

CERN
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Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
LAYER JUMP FILLING PIECES	HCMB__A090	-	00000201 to	Tosti 13
		-	00000248	
		-		
LAYER JUMP FILLING PIECES	HCMB__A092	-	00000201 to	Tosti 14
		-	00000248	
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor :*** ANSALDO Energia S.p.a

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN :*** Paolo Fessia
Tel. 00 41 22 767 32 91
E-mail. Paolo.Fessia@cern.ch

9. ***Reference specification :*** LHC-MMS/98-198 Rev. 1.1

10. ***Reference drawings :*** LHCMB__A0090 Rev. A, LHCMB__A0092 Rev. A

11. ***Part manufactured by :*** TOSTI

12. ***Acceptance test refs :*** See attachment paper

13. ***Acceptance test results :*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : 30 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
23 - 08 – 2002	Paolo Fessia	Paolo Fessia

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the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Cable Supra inner layer	HCMB__A046-		1B10104E	01B10104E
Cable Supra inner layer	HCMB__A046-		1B10104F	01B10104F
Cable Supra inner layer	HCMB__A046-		1B10105A	01B10105A
Cable Supra inner layer	HCMB__A046-		1B10105B	01B10105B
	-			
	-			
	-			
	-			
	-			
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA SPA

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Luc Oberli — ***Tel.*** 00 41 22 767 53 92; ***E-mail.*** Luc.Oberli@cern.ch

9. ***Reference specification:*** LHC-MMS/97-152

10. ***Reference drawings:***

11. ***Part manufactured by:*** ALSTOM Magnets and Superconductors

12. ***Acceptance test refs:*** See Attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : 21 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
16 – 05 - 2002	Luc Oberli	P. Lionbarger

Bl 942

EZIO SELVA S.r.l.

Controllo Qualità

via Canova,15 - 20094 CORSICO (MI) ITALY Tel. ++39024581541 Fax ++39024501652 www.ezioselva.it quality@ezioselva.it

CERTIFICATO DI COLLAUDO N° 655/02

DATA/*Date* 03/07/02	CLIENTE/*Customer*: *ANSALDO SUPERCONDUTTORI*
ORDINE CLIENTE/*Customer order*: *68 / REV.4* *POS.15*	
SPECIFICA/*Specification*: *700RM08199 / REV.4*	
Ns/CONFERMA/*Internal order*:	N° BOBINE *Nr of reels* 4 m 450

MATERIALE/*Material*: *SUPERCONDUTTORE ISOLATO + N° 2 NASTRI POLIIMIDICI "APICAL 200 AV" CONSECUTIVI (SFALSATI 50%) + N° 1 NASTRO "PIXEO 68.6 BP-S" INCROCIATO E CON ADESIVO ESTERNO.*

BOBINA / *Reel*		**01B10105A**	**01B10104E**	**01B10104F**	**01B10105B**
DIMENSIONI *Dimensions*	ISOLATO *Insulated*	2,10/2,45x15,52 2,09/2,48x15,48 2,15/2,49x15,48	2,13/2,49x15,47 2,14/2,47x15,47 2,16/2,52x15,48	2,13/2,51x15,50 2,14/2,48x15,48 2,11/2,51x15,48	2,12/2,49x15,50 2,15/2,50x15,50 2,12/2,49x15,49
	NUDO *Bare*	1,76/2,12x15,18 1,76/2,15x15,23 1,75/2,10x15,26	1,79/2,10x15,28 1,78/2,09x15,17 1,80/2,18x15,22	1,79/2,11x15,19 1,76/2,13x15,25 1,75/2,13x15,25	1,75/2,13x15,25 1,78/2,14x15,20 1,78/2,14x15,21
DATI RILEVATI SULL'ISOLAMENTO *Insulation features*	1° NASTRO APICAL (INTERNO) *1st inner tape (Apical)*	GAP mm 0,2/0,3	GAP mm 0,3/0,4	GAP mm 0,3/0,5	GAP mm 0,2/0,3
	2° NASTRO APICAL (ESTERNO) *2nd outer tape (Apical)*	GAP mm 0,3/0,4	GAP mm 0,3/0,4	GAP mm 0,2/0,4	GAP mm 0,2/0,3
	SFALSATURA 1°- 2° NASTRO *1st to 2nd tape offset*	% 45/50	% 47/50	% 48/50	% 49/50
	3° NASTRO PIXEO *3rd tape Pixeo*	GAP mm 1,9/2,0	GAP mm 2,0	GAP mm 2,0	GAP mm 1,9/2,0

NOTE : si allegano copie cartellini di identificazione dei materiali isolanti (Apical e Pixeo).
Remarks *: please find copies of insulating materials identification cards (Apical and Pixeo) in attachement.*

La Società Ezio Selva dichiara che il materiale fornito risulta conforme ai requisiti della relativa prescrizione tecnica di fornitura, al disegno e all'ordine di acquisto e dichiara di avere eseguito le prove di conformità e di collaudo previste.
Ezio Selva declares that supplied material complies with its technical specification requirements, drawing and purchase order and declares that relative tests and conformity analysis have been carried out.

Tecnico di Laboratorio Laboratory Technician	Responsabile Laboratorio Technical Manager	Collaudatore Tester	Collaudatore Tester

EZIO SELVA S.r.l.

Controllo Qualità

via Canova,15 - 20094 CORSICO (MI) ITALY Tel. ++39024581541 Fax ++39024501652 www.ezioselva.it quality@ezioselva.it

CERTIFICATO DI COLLAUDO N° 660/02

DATA/*Date* 06/07/02 | CLIENTE/*Customer*: *ANSALDO SUPERCONDUTTORI*

ORDINE CLIENTE/*Customer order*: *68 / REV.4 POS.16*

SPECIFICA/*Specification*: *700RM08199 / REV.4*

Ns/CONFERMA/*Internal order*: | N° BOBINE *Nr of reels* 4 m 740

MATERIALE/*Material*: *SUPERCONDUTTORE ISOLATO + N° 2 NASTRI POLIIMIDICI "APICAL 200 AV" CONSECUTIVI (SFALSATI 50%) + N° 1 NASTRO "PIXEO 68.6 BP-S" INCROCIATO E CON ADESIVO ESTERNO.*

BOBINA / *Reel*		**02K04701A**	**02K04701B**	**02K04702A**	**02K04701C**
DIMENSIONI *Dimensions*	ISOLATO *Insulated*	1,74/1,97x15,47 1,74/1,98x15,47 1,74/2,01x15,47	1,76/2,0x15,46 1,72/1,99x15,48 1,70/1,98x15,47	1,72/1,98x15,48 1,74/1,98x15,46 1,75/1,99x15,45	1,78/1,97x15,45 1,78/2,0x15,48 1,77/2,03x15,47
	NUDO *Bare*	1,40/1,62x15,15 1,40/1,62x15,17 1,41/1,63x15,20	1,40/1,61x15,15 1,39/1,63x15,17 1,41/1,64x15,17	1,40/1,63x15,21 1,40/1,64x15,17 1,40/1,65x15,20	1,40/1,63x15,15 1,39/1,62x15,17 1,41/1,71x15,17
DATI RILEVATI SULL'ISOLAMENTO *Insulation features*	1° NASTRO APICAL (INTERNO) *1st inner tape (Apical)*	GAP mm 0,2/0,3	GAP mm 0,2/0,3	GAP mm 0,2/0,3	GAP mm 0,2/0,3
	2° NASTRO APICAL (ESTERNO) *2nd outer tape (Apical)*	GAP mm 0,3/0,4	GAP mm 0,2/0,4	GAP mm 0,3/0,4	GAP mm 0,2/0,3
	SFALSATURA 1°- 2° NASTRO *1st to 2nd tape offset*	% 48/50	% 45/50	% 45/50	% 49/50
	3° NASTRO PIXEO *3rd tape Pixeo*	GAP mm 1,9/2,0	GAP mm 1,9/2,0	GAP mm 1,9/2,0	GAP mm 1,9/2,0
RIFERIMENTI LOTTI NASTRI APICAL UTILIZZATI *Apical tapes references lots*		20080474	20080474	20080472 20080474	20080472
RIFERIMENTI LOTTI NASTRI PIXEO UTILIZZATI *Pixeo tapes references lots*		03281003Y	033110053 03281003Y	33110053	33110053

NOTE :
Remarks *:*

La Società Ezio Selva dichiara che il materiale fornito risulta conforme ai requisiti della relativa prescrizione tecnica di fornitura, al disegno e all'ordine di acquisto e dichiara di avere eseguito le prove di conformità e di collaudo previste.
Ezio Selva declares that supplied material complies with its technical specification requirements, drawing and purchase order and declares that relative tests and conformity analysis have been carried out.

Tecnico di Laboratorio Laboratory Technician	Responsabile Laboratorio Technical Manager	Collaudatore Tester	Collaudatore Tester

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CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

the **Large Hadron Collider** project

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Interlayers spacers	LHCMB__A093	-	0932-076	Lot n° 76
	LHCMB__A094	-	0941-076	Lot n° 76
Interlayers spacers	LHCMB__A093	-	0932-077	Lot n° 77 M020
	LHCMB__A094	-	0941-077	Lot n° 77 M020
Interlayers spacers	LHCMB__A093	-	0932-078	Lot n° 78 2021
	LHCMB__A094	-	0941-078	Lot n° 78 2021
Interlayers spacers	LHCMB__A093		0932-079	Lot n° 79
	LHCMB__A094		0941-079	Lot n° 79
Interlayers spacers	LHCMB__A093		0932-080	Lot n° 80
	LHCMB__A094		0941-080	Lot n° 80
Interlayers spacers	LHCMB__A093		0932-081	Lot n° 81
	LHCMB__A094		0941-081	Lot n° 81

6. ***Recipient contractor:*** ANSALDO ENERGIA S.P.A

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Michele Modena
Tel. 00 41 22 767 34 69
E-mail. Michele.Modena@cern.ch

9. ***Reference specification:*** LHC-MMS/98-198 Rev.1.1

10. ***Reference drawings:*** LHCMB__A0093 Rev.B, LHCMB__A0094 Rev.A

11. ***Part manufactured by:*** TOSTI

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Quantity delivered : 23 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
07 - 05 – 2002	Michele Modena Katleen Coeck	.

CERN
CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
———

the **Large Hadron Collider** project

Certificate of Conformity
for CERN Delivered Components

Part name:	LAYER JUMP BOXES
Part ID:	LHCMB__A089
Serial No. / Batch No.:	Tosti 2 : Pièces A63, B63, C63 à A86, B86, C86 + A87 en remplacement de la pièce C79
Manufacturer:	TOSTI
Contract / Order No.:	CA 1169157 pour contrat F302/LHC/LHC
Comment on delivery:	Layer Jump Boxes for coil number 4 to 21 to Ansaldo
Responsible person at CERN:	Diego Perini
Tel.	+00 41 22 767 23 47
E-mail.	Diego.Perini @cern.ch
Related tech. specification:	LHC-MMS/98-198 Rev. 1.1
Related drawings:	LHCMB_A0089 – REV. B
Acceptance test references:	See attachment paper
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
15-11-2000	Diego Perini	

Q. 12/00

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Cable Supra outer layer	HCMB__A047	-	2K04701A	02K04701A
Cable Supra outer layer	HCMB__A047	-	2K04701B	02K04701B
Cable Supra outer layer	HCMB__A047	-	2K04701C	02K04701C
Cable Supra outer layer	HCMB__A047	-	2K04702A	02K04702A
		-		
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor :*** Ansaldo Energia SPA

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN :*** Luc Oberli
Tel. 00 41 22 767 53 92
E-mail. Luc.Oberli@cern.ch

9. ***Reference specification :*** LHC-MMS/97-153

10. ***Reference drawings :***

11. ***Part manufactured by :*** THE FURUKAWA ELECTRIC CO, LTD.

12. ***Acceptance test refs :*** See attachment paper

13. ***Acceptance test results :*** Conform to Technical Specification

14. ***Comments :*** Quantity delivered : 21 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
16 – 05 – 2002	Luc Oberli	

QUA_891

Ansaldo Superconduttori	**RAPPORTO DI CONTROLLO** *inspection report*	n° MA 024913
	☐ IN APPROVVIGIONAMENTO *on purchasing* ☒ IN FABBRICAZIONE *on manufacturing*	Pag. : 1 di : 1

COMMESSA/*Job*	LOTTO/*Lot*	COMPONENTE/*Item code*	DISEGNO/*Drawing*	POS/*Item*	REV./*Rev.*	
F10209EM			620RM08234	/	L	/

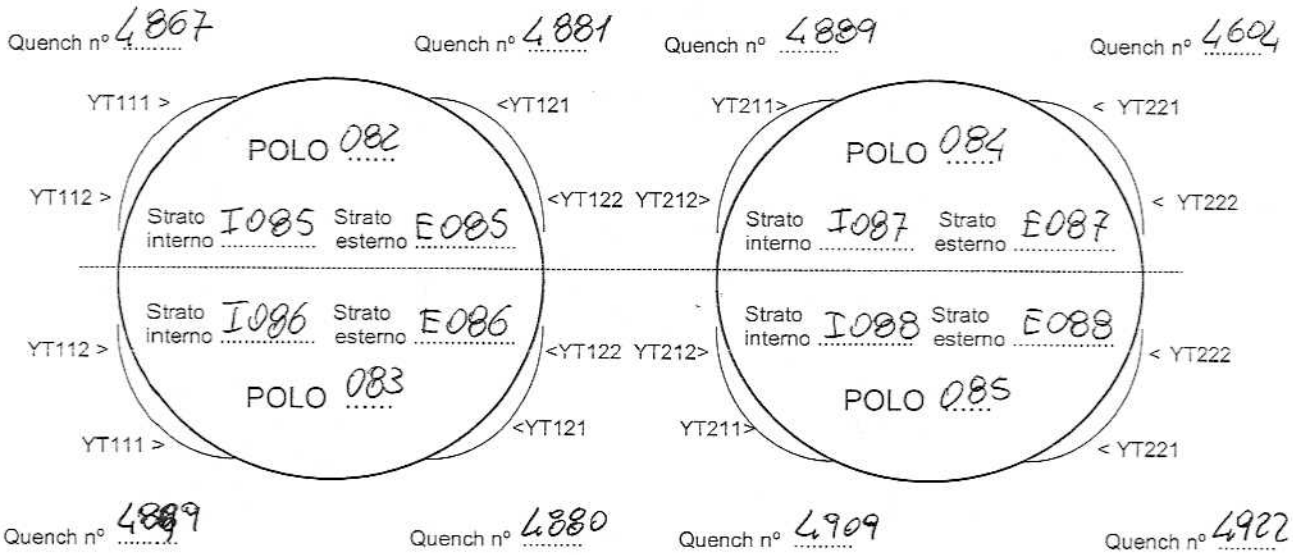
IMPIANTO/*Plant*	CLIENTE /*customer*		
LHC 30 COLD MASSES	CERN	/	/

DESCRIZIONE PRODOTTO/*Item Description*

MAGNETE M021

SCHEMA DELLE PARTI PRINCIPALI DEL MAGNETE

DIPOLO 1 | DIPOLO 2



Vista dal lato connessioni

COGNOME *Name*	SANDULLI					
FIRMA *Signature*	Sandulli					
DATA *Date*	02.12.02					
ENTE *Department*	PRC					

EZIO SELVA s.r.l.
VIA CANOVA, 15 20094 CORSICO (MI)
TEL. 02/4581541/2 - FAX. 02/4501652
http://www.ezioselva.it
E-mail:info@ezioselva.it

FUNZIONE CONTROLLO E PROVA
CONTROLLO DELLA QUALITÀ

CERTIFICATO / CERTIFICATE N° 1331/01
NS. CONFERMA / INTERNAL ORDER 11/12/01

DATA/date 21-12-01
RICHIEDENTE / Customer ANSALDO SUPERCONDUTTORI
COLLAUDO INTERNO / Inspection internal — Batch 14 × 10 CM
SPECIFICA / Specification 700 RM 08200 REV. 3
ORDINE CLIENTE / Client Order 068 REV. 5
MATERIALE / Material ~~PIATTINA/TONDO/CORDA~~ RIEMPITIVI ISOLATI + N° 2 NASTRI POLIMIDICI "200 AV" + N° 1 NASTRO POLIMIDICO "KANEKA PIXEO"

PROVE MECCANICHE Mechanical testing				RU N/mm²	A %	HB Kg/mm²	SIGMA(0,1%) N/mm²	SIGMA(0,2%) N/mm²	Rr. (0.2%) N/mm²	L. S. E. % Ap. mm	Rt N
					5,65 √So Lo=	PRESCRITTO Specified				LO= 200 mm.	
TEST N°	BOBINA Bobbin N°	DIMENSIONI NUDE mm Bare dimensions	SEZIONE section mm²								
				OTTENUTO Achieved							

L'ISOLAMENTO È STATO ESEGUITO CON N° 2 NASTRI APICAL 200 AV CONSECUTIVI E SFALSATI DEL 50% + N° 1 NASTRO KANEKA PIXEO INCROCIATO ED APERTO 2 mm

CARATTERISTICHE RICHIESTE:

- 1° NASTRO (INTERNO) POLIMIDICO - S. = 0,05 mm, L = 11 mm - APERTURA 0,1 ÷ 0,5 mm
- 2° " (ESTERNO) " " " - " "
- 3° " INCROCIATO " +FEP ESTERNO - S. = 0,07 mm L = 9 mm - " 1,8 ÷ 2,2 mm

PROVE CHIMICHE Chemical testing	PRESCRITTO Specified	OTTENUTO Achieved	TEST N° 1	TEST N° 2	TEST N° 3
Cu+Ag	≥ 99,90%				
Bi	≤ 0,001%				
Pb	≤ 0,005%				
O₂	≤ 0,04%				

PROVE FISICHE Physical testing	PRESCRITTO Specified	OTTENUTO Achieved BOB. N°	BOB. N°
RESISTIVITÀ A 20° C Resistivity	≤ 0,017544 Ω mm²/m		
CONDUTTIVITÀ A 20° C Conductivity	≥ 57 m/Ω mm²		
IACS	≥ 98,28%		

TEST N°	Bobina bobbin N°	DENOMINAZIONE Testing name	PRESCRITTO Specified	OTTENUTO Achieved	TEST N°	Bobina Bobbin N°	DENOMINAZIONE Testing name	PRESCRITTO Specified	OTTENUTO Achieved
		~~RAGGIO DI ARROTONDAMENTO Corner radius~~	~~mm ±25%~~	~~mm~~					

- DATI RILEVATI SULL'ISOLAMENTO -

A
- 3 RIGHE - 1 FRECCIA
1° NASTRO: APERTURA 0,2 mm; 2° NASTRO: APERTURA 0,3 mm; SFALSATURA 50%
3° NASTRO: APERTURA 2,0 mm

B
- 1 RIGA - 3 FRECCE
1° NASTRO: APERTURA 0,2 ÷ 0,3 mm; 2° NASTRO: APERTURA 0,2 ÷ 0,3 mm; SFALS. 47 ÷ 50%
3° NASTRO: APERTURA 2,0 ÷ 2,1 mm.

C
- 2 RIGHE - 2 FRECCE
1° NASTRO: APERTURA 0,2 ÷ 0,3 mm; 2° NASTRO: APERTURA 0,3 ÷ 0,4 mm, SFALS. 47 ÷ 49%
3° NASTRO: APERTURA 2,0 ÷ 2,2 mm

SPEDIZIONE Kg / forwarding 2074,5 (N° 976 BARRE RIEMPITIVI)
NOTE/ Remarks IN ALLEGATO DOCUMENTAZIONE RIFERIBILITÀ MATERIALI ISOLANTI

CODICE ANAGRAFICO 3118000497 / 3118041798

LA SOCIETÀ EZIO SELVA DICHIARA CHE IL MATERIALE FORNITO RISULTA CONFORME AI REQUISITI DELLA RELATIVA PRESCRIZIONE DI FORNITURA AL DISEGNO E ALL'ORDINE DI ACQUISTO E DI AVER ESEGUITO LE PROVE DI CONFORMITÀ E DI COLLAUDO PREVISTE

TEC. DI LABORATORIO LABORATORY TECHNICIAN	RESPONSABILE LABORATORIO TECHNICAL MANAGER	COLLAUDATORE TESTER	COLLAUDATORE TESTER	DIREZIONE MANAGEMENT
[signature]				

Modulo EEC Rev. 3, 03/99

RIF CARTELLINO DI PRODUZIONE ....

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 105
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -90
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	1

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -102
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	1

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -95
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -91
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -85
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 - 67
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 - 99
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	1

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -96
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Fil

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -C
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -89
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 - 93
WIDTH:	11.0mm
NET WGT.:	1.02 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICAL® HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 - 112
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

kaneka APICA® HIGH-TECH MATERIALS, INC. Polyimide Fil

FILM TYPE:	200AV
THICKNESS:	50.8 uM
LOT #:	20041471 -
WIDTH:	11.0mm
NET WGT.:	1.03 KG
LENGTH:	1123M
PO#:	F-333/LHC/LHC
PART NO.	P1
SPLICES:	0

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	7
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	4
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	13
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	14
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	8
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	9
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	10
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	1
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	5
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	2
KANEKA CORPORATION			

PRODUCT NAME	KANEKA PIXEO	GRADE	68.6BP-S
QUANTITY	68.6 μm × 9mm × 535 m		
LOT.No.	033110056	ROLLNo.	6
KANEKA CORPORATION			

kaneka APICAL®
HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041475-111
WIDTH: 11.0mm
NET WGT.: 1.02 KG
LENGTH: 1272M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 1

kaneka APICAL®
HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041471-97
WIDTH: 11.0mm
NET WGT.: 1.02 KG
LENGTH: 1123M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 0

kaneka APICAL®
HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041471-(1)
WIDTH: 11.0mm
NET WGT.: 1.03 KG
LENGTH: 1123M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 0

Iscritta al Registro Società del Tribunale di Milano al N. 216708 - Vol. 5936 fasc. 8 - C.C.I.A.A Milano 1108741 - Codice Fiscale e Partita IVA N: 06600370156

EZIO SELVA s.r.l.
VIA CANOVA, 15 20094 CORSICO (MI)
TEL. 02/4581541/2 - FAX. 02/4501652
http://www.ezioselva.it
E-mail:info@ezioselva.it

FUNZIONE CONTROLLO E PROVA
CONTROLLO DELLA QUALITÀ

CERTIFICATO / CERTIFICATE N° 93/02 — 24/1/02
NS. CONFERMA / INTERNAL ORDER — CM 11÷20

DATA/date: 31.01.02
RICHIEDENTE / Customer: ANSALDO SUPERCONDUTTORI
COLLAUDO INTERNO / Inspection Internal: 1 tipo — Batch N° 1+2
SPECIFICA / Specification: 700 RM 08200 - Rev. 3
ORDINE CLIENTE / Client Order: 069 RN 7
MATERIALE / Material: ~~PIATTINA CONDUTTORE Cu ETP UNI 5649-71~~ RIEMPITIVI ISOLATI + N° 2 NASTRI POLIMIDICI "200 AV" + N° 1 NASTRO POLIMIDICO "KANEKA PIXEO"

PROVE MECCANICHE / Mechanical testing	RU N/mm²	A %	HB Kg/mm²	SIGMA(0,1%) N/mm²	SIGMA(0,2%) N/mm²	Rr. (0,2%) N/mm²	L. S. E. % Ap. mm	Rt N
		5,65 √So Lo=		PRESCRITTO Specified			LO= 200 mm.	

TEST N° | BOBINA Bobbin N° | ~~DIMENSIONI NUDE mm Bare dimensions~~ | ~~SEZIONE Section mm²~~ | OTTENUTO Achieved

- DATI RILEVATI SULL'ISOLAMENTO
- 4 FRECCE
1° NASTRO: APERTURA 0,1÷0,2 mm; 2° NASTRO: APERTURA 0,3 mm;
SFALSATURA 50%~
3° NASTRO: APERTURA 2,0 mm

CARATTERISTICHE RICHIESTE:
- 1° NASTRO (INTERNO) POLIMIDICO = S=0,05 mm, L.=11 mm - APERTURA=0,1÷0,5 mm
- 2° " (ESTERNO) " " " " "
- 3° " (INCROCIATO) " ~~FEP~~ ESTERNO - S=0,07 mm, L=9 mm
APERTURA = 1,8÷2,2 mm

PROVE CHIMICHE / Chemical testing	PRESCRITTO Specified	OTTENUTO Achieved	TEST N° 1	TEST N° 2	TEST N° 3
Cu+Ag	≥ 99,90%				
Bi	≤ 0,001%				
Pb	≤ 0,005%				
O_2	≤ 0,04%				

PROVE FISICHE / Physical testing	PRESCRITTO Specified	OTTENUTO Achieved BOB. N°	BOB. N°
RESISTIVITÀ A 20° C / Resistivity	≤ 0,017544 Ω mm²/m		
CONDUTTIVITÀ A 20° C / Conductivity	≥ 57 m/ Ω.mm²		
IACS	≥ 98,28%		

TEST N°	Bobina bobbin N°	DENOMINAZIONE Testing name	PRESCRITTO Specified	OTTENUTO Achieved	TEST N°	Bobina Bobbin N°	DENOMINAZIONE Testing name	PRESCRITTO Specified	OTTENUTO Achieved
		RAGGIO DI ARROTONDAMENTO Corner radius	mm ± 25%	mm					

SPEDIZIONE Kg / forwarding: 688,0 (N° 2 CASSE)
NOTE/ Remarks:
CODICE ANAGRAFICO: 3118000497 / 3118041798 /

LA SOCIETÀ EZIO SELVA DICHIARA CHE IL MATERIALE FORNITO RISULTA CONFORME AI REQUISITI DELLA RELATIVA PRESCRIZIONE DI FORNITURA, AL DISEGNO E ALL'ORDINE DI ACQUISTO E DI AVER ESEGUITO LA PROVE DI CONFORMITÀ E DI COLLAUDO PREVISTE.

TEC. DI LABORATORIO / LABORATORY TECHNICIAN	RESPONSABILE LABORATORIO / TECHNICAL MANAGER	COLLAUDATORE / TESTER	COLLAUDATORE / TESTER	DIREZIONE / MANAGEMENT
[signature]				

RIF. CARTELLINO DI PRODUZIONE

...neka APICAL®
...TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041471 -35
WIDTH: 11.0mm
NET WGT.: 1.03 KG
LENGTH: 1123M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 0

Kaneka APICAL®
HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041471 -37
WIDTH: 11.0mm
NET WGT.: 1.03 KG
LENGTH: 1123M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 0

Kaneka APICAL®
HIGH-TECH MATERIALS, INC. Polyimide Film

FILM TYPE: 200AV
THICKNESS: 50.8 uM
LOT #: 20041471 -29
WIDTH: 11.0mm
NET WGT.: 1.03 KG
LENGTH: 1123M
PO#: F-333/LHC/LHC
PART NO. P1
SPLICES: 0

Ricevuto 23/09/00 fri.

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
———

Copia a Tortelli

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20041471KP1-1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer — ***Tel.*** +00 41 22 767 4878 — ***E-mail.*** Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-08-14	Hans Kummer	H. Kummer

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20041471KP1-2
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-08-14	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20041471KP1-3
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28

Responsible person at CERN:	Hans Kummer	***Tel.***	+00 41 22 767 4878
		E-mail.	Hans.Kummer@cern.ch

Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-08-14	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
———

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20041471KP1-4
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-08-14	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080472KP1-1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080472KP1-2
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
———

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080472KP1-3
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080472KP1-4
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080474KP1-1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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the
Large Hadron Collider
project

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080474KP1-2
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080474KP1-3
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls: 28
Responsible person at CERN:	Hans Kummer — ***Tel.*** +00 41 22 767 4878 — ***E-mail.*** Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Plain tape P1
CERN Serial No.:	20080474KP1-4
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:28
Responsible person at CERN:	Hans Kummer — ***Tel.*** +00 41 22 767 4878 — ***E-mail.*** Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-06	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.

Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Adhesive tape A1
CERN Serial No.:	032810036KA1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:26
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-12-06	Hans Kummer	

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the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Adhesive tape A1
CERN Serial No.:	032810038KA1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:24
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2000-11-30	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

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LHC-XXX-FR-0000 rev. **1.0**

EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Adhesive tape A1
CERN Serial No.:	03281003yKA1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:26
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-10	Hans Kummer	

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the **Large Hadron Collider** project

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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Adhesive tape A1
CERN Serial No.:	033110053KA1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:24
Responsible person at CERN:	Hans Kummer — ***Tel.*** +00 41 22 767 4878 — ***E-mail.*** Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-01-22	Hans Kummer	

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Switzerland

the **Large Hadron Collider** project

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EDMS Document No.
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Certificate of Conformity
for CERN Delivered Components

Part name:	Polyimide film for cable insulation
Part ID:	Adhesive tape A1
CERN Serial No.:	033110056KA1
Manufacturer:	Kaneka
Contract / Order No.:	F333/LHC/LHC
Comment on delivery:	Number of pad rolls:25
Responsible person at CERN:	Hans Kummer
Tel.	+00 41 22 767 4878
E-mail.	Hans.Kummer@cern.ch
Related tech. specification:	LHC/MMS/DT 5788 (rev. of annex C2 of LHC-MMS/98-198)
Acceptance test references:	LHC-MMS 2000-03
Acceptance test results:	Conform to Technical Specification

CERN certifies that the delivered material is conform to the technical specification mentioned above.

Date:	***Name:***	***Signature***
2001-04-10	Hans Kummer	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Austenitic insert	HCMB_ _ A152	-	MA000013	Batch N° MAL00013
Austenitic insert	HCMB_ _ A152	-	MA000014	Batch N° MAL00014
Austenitic insert	HCMB_ _ A152	-	MA000015	Batch N° MAL00015
Austenitic insert	HCMB_ _ A152	-	MA000016	Batch N° MAL00016
Austenitic insert	HCMB_ _ A152	-	MA000017	Batch N° MAL00017
Austenitic insert	HCMB_ _ A152	-	MA000018	Batch N° MAL00018
Austenitic insert	HCMB_ _ A152	-	MA000019	Batch N° MAL00019
		-		

2021

6. ***Recipient contractor:***	ANSALDO ENERGIA S.P.A.		
7. ***Contract / Order No :***	F-302/LHC/LHC		
8. ***Responsible person at CERN:***	Aniello RUSSO	***Tel.***	00 41 22 767 2977
		E-mail.	Aniello.Russo@cern.ch
9. ***Reference specification:***	LHC-MB-A-C1-0020 Rev.0		
10. ***Reference drawings:***	LHCMB_ _A0152 Rev. D.		
11. ***Part manufactured by:***	Ernesto Malvestiti s.p.a (IT)		
12. ***Acceptance test refs:***	See attachment paper		
13. ***Acceptance test results:***	Conform to Technical Specification		
14. ***Comments:***	Quantity for 7 magnets Delivered with the correspondent nested lamination packs		

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
29 – 10 - 2002	Aniello RUSSO	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Cold Bore Tube	HCVCC_001	-	DM010023	MB-CBT 0023 M023
Cold Bore Tube	HCVCC_001	-	DM010024	MB-CBT 0024 M023
Cold Bore Tube	HCVCC_001	-	DM010025	MB-CBT 0025
Cold Bore Tube	HCVCC_001	-	DM010027	MB-CBT 0027 M015
Cold Bore Tube	HCVCC_001	-	DM010031	MB-CBT 0031 M019
Cold Bore Tube	HCVCC_001	-	DM010032	MB-CBT 0032
Cold Bore Tube	HCVCC_001	-	DM010033	MB-CBT 0033 M022
Cold Bore Tube	HCVCC_001	-	DM010034	MB-CBT 0034
Cold Bore Tube	HCVCC_001	-	DM010035	MB-CBT 0035 M015
Cold Bore Tube	HCVCC_001	-	DM010036	MB-CBT 0036 M020
Cold Bore Tube	HCVCC_001	-	DM010037	MB-CBT 0037
Cold Bore Tube	HCVCC_001	-	DM010038	MB-CBT 0038 M022
Cold Bore Tube	HCVCC_001	-	DM010039	MB-CBT 0039 M021

6. ***Recipient contractor:***	ANSALDO ENERGIA S.p.a
7. ***Contract / Order No :***	F-302/LHC/LHC
8. ***Responsible person at CERN:***	Frédéric Savary — ***Tel.*** 00 41 22 767 82 96 — ***E-mail.*** Frederic.Savary@cern.ch
9. ***Reference specification:***	LHC-MMS/98-198/G05 & LHC-MMS/2001-30/DT
10. ***Reference drawings:***	
11. ***Part manufactured by:***	D.M.V. Stainless Italy
12. ***Acceptance test refs:***	LHC-MMS/99-207 and LHC-MMS/98-198 Rev1.1 Annexe G5, Annexe C12
13. ***Acceptance test results:***	Conform to Technical Specification
14. ***Comments:***	Delivered total quantity : 20 OVER 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
04 – 05 – 2002	Frédéric Savary	

CERN
CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

the **Large Hadron Collider** project

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Cold Bore Tube	HCVCC_001	-	DM010040	MB-CBT 0040 M019
Cold Bore Tube	HCVCC_001	-	DM010066	MB-CBT 0066 M013
Cold Bore Tube	HCVCC_001	-	DM010067	MB-CBT 0067 M018
Cold Bore Tube	HCVCC_001	-	DM010068	MB-CBT 0068 M
Cold Bore Tube	HCVCC_001	-	DM010069	MB-CBT 0069 M017
Cold Bore Tube	HCVCC_001	-	DM010070	MB-CBT 0070 M018
Cold Bore Tube	HCVCC_001	-	DM010074	MB-CBT 0074 M020
Cold Bore Tube	HCVCC_001	-	DM010075	MB-CBT 0075 M021
Cold Bore Tube	HCVCC_001	-	DM010077	MB-CBT 0077 M013
Cold Bore Tube	HCVCC_001	-	DM010079	MB-CBT 0079 M016
Cold Bore Tube	HCVCC_001	-	DM010084	MB-CBT 0084 M016
Cold Bore Tube	HCVCC_001	-	DM010090	MB-CBT 0090 M017
	-			

6. ***Recipient contractor:***	ANSALDO ENERGIA S.p.a
7. ***Contract / Order No :***	F-302/LHC/LHC
8. ***Responsible person at CERN:***	Frédéric Savary — ***Tel.*** 00 41 22 767 82 96 — ***E-mail.*** Frederic.Savary@cern.ch
9. ***Reference specification:***	LHC-MMS/98-198/G05 & LHC-MMS/2001-30/DT
10. ***Reference drawings:***	
11. ***Part manufactured by:***	D.M.V. Stainless Italy
12. ***Acceptance test refs:***	LHC-MMS/99-207 and LHC-MMS/98-198 Rev1.1 Annexe G5, Annexe C12
13. ***Acceptance test results:***	Conform to Technical Specification
14. ***Comments:***	Delivered total quantity : 27 OVER 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
04 – 05 – 2002	Frédéric Savary	

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

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Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
DIPOLE DIODE STACK	HCDQDBB002	-	11000350	MDB0350
	HCDQDBB002	-	11000351	MDB0351 M021
	HCDQDBB002	-	11000361	MDB0361
	HCDQDBB002	-	11000363	MDB0363 M010
	HCDQDBB002	-	11000368	MDB0368 M008
	HCDQDBB002	-	11000372	MDB0372
	-			
	-			
	-			
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA S.p.a

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Alain Gharib
Tel. 00 41 22 767 93 45
E-mail. Alain.Gharib@cern.ch

9. ***Reference specification:*** IT-2648

10. ***Reference drawings:*** LHCDQDDP0002

11. ***Part manufactured by:*** OCEM

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** For 6 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
10 – 12 – 2001	Alain Gharib	

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CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

the
Large Hadron Collider
project

Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
End cover CS	HCMB__S008	-	MP000026	90078-35 2021
End cover CS	HCMB__S008	-	MP000036	90078-52
End cover CS	HCMB__S008	-	MP000084	90078-84 MB
		-		
		-		
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor :*** ANSALDO ENERGIA S.p.a

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN :*** Francesco Bertinelli
Tel. 00 41 22 767 97 91
E-mail. Francesco.Bertinelli@cern.ch

9. ***Reference specification :*** LHC-MMS/98-198/G09

10. ***Reference drawings :*** LHCMB__S0008 Rev F

11. ***Part manufactured by :*** Metso Powdermet Oy

12. ***Acceptance test refs :*** See attachment paper

13. ***Acceptance test results :*** Conform to technical specification

14. ***Comments :*** Delivered quantity : for 3 magnets - 10 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
10 - 10 – 2002	Francesco Bertinelli	Bertinelli

BAM 846

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
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Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
End cover LS	HCMB__S007	-	MP000067 ✓	90096-20
End cover LS	HCMB__S007	-	MP000079 ✓	90096-41
End cover LS	HCMB__S007	-	MP000082 ✓	90096-44
End cover LS	HCMB__S007	-	MP000085 ✓	90096-57 H012
End cover LS	HCMB__S007	-	MP000138 ✓	90108-01 2021
End cover LS	HCMB__S007	-	MP000139 ✓	90108-02 H008
	-			
	-			
	-			
	-			

6. ***Recipient contractor :*** ANSALDO ENERGIA S.p.a

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN :*** Katleen Coeck
Tel. 00 41 22 767 37 27
E-mail. Katleen.Coeck@cern.ch

9. ***Reference specification :*** LHC-MMS/98-198/G09

10. ***Reference drawings :*** LHCMB__S0007 Rev F

11. ***Part manufactured by :*** Metso Powdermet Oy

12. ***Acceptance test refs :***

13. ***Acceptance test results :*** Conform to technical specification

14. ***Comments :*** Delivered quantity : for 6 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
28 - 11 – 2002	Katleen Coeck	

CERN
CH-1211 Geneva 23
Switzerland

LHC Project Document No.
LHC-XXXXX-QA-123456

EDMS Document No.
666666

AT-MAS

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Helium heat exchanger tube	HCQHBBP004	-	CR040016	
Helium heat exchanger tube	HCQHBBP004	-	CR040017	
Helium heat exchanger tube	HCQHBBP004	-	CR040018	
Helium heat exchanger tube	HCQHBBP004	-	CR040019	
Helium heat exchanger tube	HCQHBBP004	-	CR040020	~~2018~~ 2003
Helium heat exchanger tube	HCQHBBP004	-	CR040021	
Helium heat exchanger tube	HCQHBBP004	-	CR040022	
Helium heat exchanger tube	HCQHBBP004	-	CR040023	2021
Helium heat exchanger tube	HCQHBBP004	-	CR040024	
Helium heat exchanger tube	HCQHBBP004	-	CR040025	
	-			
	-			
	-			

6. ***Recipient contractor :*** ANSALDO SUPERCONDUTTORI

7. ***Contract / Order No :*** F302/LHC/LHC

8. ***Responsible person at CERN :*** Francesco Bertinelli
Tel. 00 41 22 767 97 91
E-mail. Francesco.Bertinelli@cern.ch

9. ***Reference specification :*** LHC-QHB-C I-0001

10. ***Reference drawings :*** LHCQBX_P0004, rev C

11. ***Part manufactured by :*** CERN-EST

12. ***Acceptance test refs :***

13. ***Acceptance test results :*** Conform to Technical Specification

14. ***Comments :*** Delivered total quantity : for 10 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
14 janvier 2003	Francesco Bertinelli	Bertinelli

CERN
CH-1211 Geneva 23
Switzerland

the **Large Hadron Collider** project

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LHC-XXXXX-QA-123456

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Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
INTERCONNECTION BELLOWS SET				Batch 53
Heat exchanger side bellow (DBX)	HCQBBIX002	-	SK000021	
Heat exchanger central bellow (QBX)	HCQBBIX001	-	SK000046	
Busbar bellow M1	HCQBBIM001	-	SK000141	
Busbar bellow M2	HCQBBIM001	-	SK000147	
Busbar bellow M3 on 2012	HCQBBIM001	-	SK000145	
Flexible ligne "N"	HCQBBIN001	-	SK000039	
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Blazej SKOCZEN
Tel. 00 41 22 767 89 84
E-mail. Blazej.Skoczen@cern.ch

9. ***Reference specification:*** LHC-LI-ES-003 Rev.0.1

10. ***Reference drawings:*** LHCMB__S0084 Rev. C, LHCMB__S0085 Rev. C, LHCMB__S0086 Rev. B, LHCMB__S0087 Rev. C, LHCMB__S0088 Rev. B, LHCMB__S0089 Rev. B, LHCMB__S0090 Rev. C, LHCDCCMA0040

11. ***Part manufactured by:*** SKODOCK GmbH

12. ***Acceptance test refs:***

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : 12 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
08 - 04 - 2002	Blazej SKOCZEN	9/04/02 B. S.

M009

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1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
INTERCONNECTION BELLOWS SET				Batch 56
Heat exchanger side bellow (DBX) 2012	HCQBBIX002	-	SK000041	
Heat exchanger central bellow (QBX) 2012	HCQBBIX001	-	SK000008	
Busbar bellow M1 on 2012	HCQBBIM001	-	SK000076	(MA00159 - BATCH 50)
Busbar bellow M2	HCQBBIM001	-	SK000070	
Busbar bellow M3	HCQBBIM001	-	SK000061	(MA00167 - BATCH 53)
Flexible ligne "N"	HCQBBIN001	-	SK000044	
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Blazej SKOCZEN
Tel. 00 41 22 767 89 84
E-mail. Blazej.Skoczen@cern.ch

9. ***Reference specification:*** LHC-LI-ES-003 Rev.0.1

10. ***Reference drawings:*** LHCMB__S0084 Rev. C, LHCMB__S0085 Rev. C, LHCMB__S0086 Rev. B, LHCMB__S0087 Rev. C, LHCMB__S0088 Rev. B, LHCMB__S0089 Rev. B, LHCMB__S0090 Rev. C, LHCDCCMA0040

11. ***Part manufactured by:*** SKODOCK GmbH

12. ***Acceptance test refs:***

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : 14 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
08 - 04 - 2002	Blazej SKOCZEN	9/04/02 B. Jz

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Certificate of Conformity
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1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
LAMINATION Type A	HCMB__A133	-	FSG00007	
LAMINATION Type AA	HCMB__A136	-	FSG00007	
LAMINATION Type A	HCMB__A133	-	FSG00008	
LAMINATION Type AA	HCMB__A136	-	FSG00008	
LAMINATION Type A	HCMB__A133	-	FSG00009	
LAMINATION Type AA	HCMB__A136	-	FSG00009	
LAMINATION Type A	HCMB__A133	-	FSG00010	2021
LAMINATION Type AA	HCMB__A136	-	FSG00010	2021
	-			
	-			

6. ***Recipient contractor:*** ANSALDO ENERGIA S.p.a.

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN:*** Katleen Coeck
Tel. 00 41 22 767 37 27
E-mail. Katleen.Coeck @cern.ch

9. ***Reference specification:*** LHC-MB_A-C1-0019

10. ***Reference drawings:*** LHCMB__A0133 Rev C, LHCMB__A0136 Rev C,

11. ***Part manufactured by:*** FSG

12. ***Acceptance test refs:*** See attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : 18 magnets over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
13 novembre 2002	Katleen Coeck	

Rec. 02/12/02

2014

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for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***	
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*		
CS & NCS lamination pack	HCMB_ _ A032	-	MA000013	Batch N° MAL00013	2021
CS & NCS lamination pack	HCMB_ _ A032	-	MA000014	Batch N° MAL00014	
CS & NCS lamination pack	HCMB_ _ A032	-	MA000015	Batch N° MAL00015	2014
CS & NCS lamination pack	HCMB_ _ A032	-	MA000016	Batch N° MAL00016	
CS & NCS lamination pack	HCMB_ _ A032	-	MA000017	Batch N° MAL00017	
CS & NCS lamination pack	HCMB_ _ A032	-	MA000018	Batch N° MAL00018	
CS & NCS lamination pack	HCMB_ _ A032	-	MA000019	Batch N° MAL00019	
		-			

6. ***Recipient contractor:***	ANSALDO ENERGIA S.P.A.
7. ***Contract / Order No :***	F-302/LHC/LHC
8. ***Responsible person at CERN:***	Aniello RUSSO — ***Tel.*** 00 41 22 767 2977 — ***E-mail.*** Aniello.Russo@cern.ch
9. ***Reference specification:***	LHC-MB-A-C1-0020 Rev.0
10. ***Reference drawings:***	LHCMB_ _A0032 Rev. D.
11. ***Part manufactured by:***	Ernesto Malvestiti s.p.a (IT)
12. ***Acceptance test refs:***	See attachment paper
13. ***Acceptance test results:***	Conform to Technical Specification
14. ***Comments:***	Quantity for 7 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
29 – 10 - 2002	Aniello RUSSO	

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1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Line N	HCDCCMA073	-	DM000140 to	MB N LINE-0140 to
		-	DM000159	MB N LINE-0159
Line N	HCDCCMA073	-	DM000200 to	MB N LINE-0200 to
		-	DM000219	MB N LINE-0219
Line N	HCDCCMA073	-	DM000260 to	MB N LINE-0260 to
		-	DM000304	MB N LINE-0304
Line N	HCDCCMA073	-	DM000493 to	MB N LINE-0493 to
		-	DM000542	MB N LINE-0542
Line N	HCDCCMA073	-	DM000543 to	MB N LINE-0543 to
		-	DM000549	MB N LINE-0549
Line N	HCDCCMA073	-	DM000550 to	MB N LINE-0550 to
		-	DM000592	MB N LINE-0592

6. ***Recipient contractor:*** ANSALDO ENERGIA Spa

7. ***Contract / Order No :*** F462/LHC/LHC

8. ***Responsible person at CERN:*** Aniello Russo
Tel. 00 41 22 767 29 77
E-mail. Aniello.Russo@cern.ch

9. ***Reference specification:*** LHC-MMS/98-198/G14

10. ***Reference drawings:*** LHCDCCMA0073 Rev A

11. ***Part manufactured by:*** D.M.V. Stainless Italy

12. ***Acceptance test refs:*** see attachment paper

13. ***Acceptance test results:*** Conform to Technical Specification

14. ***Comments:*** Delivered quantity : for 185 magnets

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature:***
28 – 11 – 2002	Aniello Russo	

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AT-MAS

Certificate of Conformity
for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000117	MCS-MA-I0117
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000128	MCS-MA-I0128
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000130	MCS-MA-I0130
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000131	MCS-MA-I0131
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000137	MCS-MA-I0137 2021
MCS – SEXTUPOLE CORRECTOR	HCMCSMH001	-	KE000139	MCS-MA-I0139 2021
		-		
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6. ***Recipient contractor:***	ANSALDO Superconduttori		
7. ***Contract / Order No :***	F-462/LHC/LHC		
8. ***Responsible person at CERN:***	Michael Allitt	***Tel.***	00 41 22 767 97 65
		E-mail.	Michael.Allitt@cern.ch
9. ***Reference specification:***	LHC-MC-CI-0001 and addenda		
10. ***Reference drawings:***	LHCMCSMG0001		
11. ***Part manufactured by:***	CAT/Kirloskar Electric Company Ltd.		
12. ***Acceptance test refs:***	See attachment paper		
13. ***Acceptance test results:***	Conform to Technical Specification		
14. ***Comments:***	Delivered quantity : for 3 magnets		

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
21 janvier 2003	Michael Allitt	p.l.

2021

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Certificate of Conformity

for CERN supplied components

1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Shrinking cylinder concave	HCMB__S142	-	BU000136	U-0136
Shrinking cylinder convex	HCMB__S143	-	BU000107	L-0107
		-		
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		-		
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor :*** ANSALDO ENERGIA S.P.A

7. ***Contract / Order No :*** F-302/LHC/LHC

8. ***Responsible person at CERN :*** Frederic Savary
Tel. 00 41 22 767 82 96
E-mail. Frederic Savary@cern.ch

9. ***Reference specification :*** LHC-MMS/98-198/G08

10. ***Reference drawings :*** LHCMB__S0142 Rev B - LHCMB__S0143 Rev B

11. ***Part manufactured by :*** BUTTING EDELSTAHLROHRE

12. ***Acceptance test refs :*** See attachment paper

13. ***Acceptance test results :*** Conform to technical specification

14. ***Comments :*** Delivered quantity :18 over 30

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
26 – 07 – 2002	Frederic Savary	

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1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
Cryogenic Temperature Sensor	HCQITESCXT-		CR014931	CX_LS_X08951
Cryogenic Temperature Sensor	HCQITESCXT-		CR014881	CX_LS_X08956
Cryogenic Temperature Sensor	HCQITESCXT-		CR014691	CX_LS_X08961
Cryogenic Temperature Sensor	HCQITESCXT-		CR015481	CX_LS_X08779
Cryogenic Temperature Sensor	HCQITESCXT-		CR013651	CX_LS_X09332
Cryogenic Temperature Sensor	HCQITESCXT-		CR013771	CX_LS_X09334
Cryogenic Temperature Sensor	HCQITESCXT-		CR013781	CX_LS_X11693 2025
Cryogenic Temperature Sensor	HCQITESCXT-		CR013801	CX_LS_X11789
Cryogenic Temperature Sensor	HCQITESCXT-		CR013821	CX_LS_X11792
Cryogenic Temperature Sensor	HCQITESCXT-		CR013831	CX_LS_X11798
Cryogenic Temperature Sensor	HCQITESCXT-		CR013841	CX_LS_X11804 2022
Cryogenic Temperature Sensor	HCQITESCXT-		CR013551	CX_LS_X11807
Cryogenic Temperature Sensor	HCQITESCXT-		CR013531	CX_LS_X11810
Cryogenic Temperature Sensor	HCQITESCXT-		CR013741	CX_LS_X11815
Cryogenic Temperature Sensor	HCQITESCXT-		CR018931	CX_LS_X13726
Cryogenic Temperature Sensor	HCQITESCXT-		CR018851	CX_LS_X13727 2021
Cryogenic Temperature Sensor	HCQITESCXT-		CR018781	CX_LS_X13728
Cryogenic Temperature Sensor	HCQITESCXT-		CR018871	CX_LS_X13729

6. ***Recipient contractor:***	ANSALDO ENERGIA Spa
7. ***Contract / Order No :***	F-302/LHC/LHC
8. ***Responsible person at CERN:***	Nicolas VAUTHIER — ***Tel.*** 00 41 22 767 42 66 — ***E-mail.*** Nicolas.vauthier@cern.ch
9. ***Reference specification:***	LHC-QIT-AP0002: installation Guide for LHC Cryogenic Thermometer
10. ***Reference drawings:***	
11. ***Part manufactured by:***	Lake Shore®/CERN
12. ***Acceptance test refs:***	See Attached Cryogenic Thermometer Travellers
13. ***Acceptance test results:***	Conform to Technical Specification
14. ***Comments:***	- Delivered quantity: for 18 magnets. - Cryogenic Thermometer is provided with its cover in a protecting box, wires and temporary WAGO connector are mounted. - Traveller must be filled and returned to CERN. - Description's Interventions are reminded in Traveller folder.

CERN certifies that the supplied material is conform to the reference specification.

Date:	***Name***	***Signature:***
17-Sep-2002	N. Vauthier	

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1. ***Part description***	2. ***CERN Part ID*** *(19 chars)*			5. ***Other identification***
	3. ***Part No.*** *(10 chars)*	-	4. ***Serial No.*** *(8 chars)*	
INSERT Type A	HCMB__A148	-	FSG00007	
INSERT Type A	HCMB__A148	-	FSG00008	
INSERT Type A	HCMB__A148	-	FSG00009	
INSERT Type A	HCMB__A148	-	FSG00010	2021
		-		
		-		
		-		
		-		
		-		
		-		

6. ***Recipient contractor:***	ANSALDO ENERGIA S.p.a		
7. ***Contract / Order No :***	F-302/LHC/LHC		
8. ***Responsible person at CERN:***	Katleen Coeck	***Tel.***	00 41 22 767 37 27
		E-mail.	Katleen Coeck@cern.ch
9. ***Reference specification:***	LHC-MB_A-C1-0019		
10. ***Reference drawings:***	LHCMB__A0148 Rev C		
11. ***Part manufactured by:***	FSG		
12. ***Acceptance test refs:***	See attachment paper		
13. ***Acceptance test results:***	Conform to Technical Specification		
14. ***Comments:***	Delivered quantity : 18 magnets over 30		

CERN certifies that the supplied material is conform to the reference specification.

Date :	***Name :***	***Signature :***
13 novembre 2002	Katleen Coeck	

Ric. 02/12/02