

ns. rif. ASG/UP2/6.176/ft

Vs. rif.

Attn. Mr. Savary
AT/MAS division
CERN
CH 1211 Geneva 23

Genova, 16/02/2006

Oggetto: Bus-bars wet by rain (supplier CERN)

Dear Mr. Savary,

we refer to the communications between Ansaldo Superconduttori (ASG) and CERN and the following visit, in ASG, from the Surveyors of the transport Companies about the problem of bus-bars wet by rain on 2005 September, 7th.

We would like to remind CERN that the problem has been caused by rain water penetrated inside the plastic bags because no cover was installed onto the trucks during the travel of these components by *Sonder transporte GMBH* (see attached pictures).

In order to guarantee the necessary electrical insulation between bus-bars and ground, ASG had to perform extra electrical checks of each components just before the longitudinal welding of the cold mass.

Surveyors have been invited to check the status of bus-bars and to attend to the procedure of the tests.

ASG proceeded with the necessary ground insulation electrical test and with the installation of all the relevant bus-bars.

The following procedure has been applied: a) positioning of M2 ⁽¹⁾ bus-bar on the lower half-yoke; b) half-shell installation; c) perform ground insulation electrical test on M2 bus-bar.

Then check proceeded as follows: d) positioning of M1-M3 ⁽¹⁾ bus-bars on the upper half-yoke; e) half-shell installation; f) perform ground insulation electrical test on M1-M3 bus-bars

Please find on next tables the details of the tests performed.

After these preliminary checks, ASG performed, as usual, the final electrical test on M1, M2 & M3 bus-bars with the cold mass under pressure, that means under the welding press.

We would like to underline that all these final tests, just before longitudinal welding, always gave us good results.

We remain at your disposal for any further technical information.

Best regards,

F. Terzi - P. Gagliardi

Ansaldo Superconduttori S.p.A.

Società con Unico Socio

Società soggetta all'attività di Direzione e Coordinamento della CASTEL SA (Gruppo Malacalza)

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SINCERT



Remarks

⁽¹⁾ Ground insulation electrical test performed at 1000 V_{DC} (instrument: *Megger BM 21*)

⁽²⁾ M1, M2, M3 means different positions of the bus-bars on cold mass assembly

Others

Project: LHC Cold Masses
ASG job nr: 0251
Subject: nr. 10 sets of bus-bars type A + nr. 10 sets of bus-bars type B (3 bus-bars/set).
Total nr. 60 bus-bars
See annexed Certificates of Conformity
Delivery date: 07/09/2005
Supplier: CERN – Ginevra (CH)
Manufacturer: BINP - Novosibirsk (Russia)

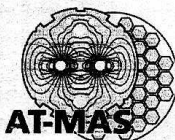
Tabella n. 1 – Bus-bars tipo A

Ref. CM nr.	Bus-bars tipo A set n.	Risultato test elettrico	Operazione di ripristino effettuata	Ore manodopera impegnate	Note
2273	500	OK	NO	0,5	
2281	501	OK	NO	0,5	
2272	502	OK	NO	0,5	
2275	503	OK	NO	0,5	
2276	504	OK	NO	0,5	
2271	505	OK	NO	0,5	
2269-2270	506	NOT OK	YES	6,0	
2267	507	OK	NO	0,5	
2270-2253	508	OK	NO	0,5	
2269-2282	509	NOT OK	YES	6,0	

Tabella n. 2 – Bus-bars tipo B

Ref. CM nr.	Bus-bars tipo B set n.	Risultato test elettrico	Operazione di ripristino effettuata	Ore manodopera impegnate	Note
2263-2296	507	NOT OK	YES	6,0	
2253-2261	508	NOT OK	YES	6,0	
2261-2269	509	OK	NO	0,5	
2255	510	OK	NO	0,5	
2252	511	OK	NO	0,5	
2262-2263-2262	512	NOT OK	YES	6,0	
2257-2296	513	NOT OK	YES	6,0	
2258-2300	514	NOT OK	YES	6,0	
2260	515	OK	NO	0,5	
2254	516	OK	NO	0,5	

CERN
CH-1211 Geneva 23
Switzerland



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)
BUS-BARS SET - Type A	HCDCBHA055-BI000500	Set 500
BUS-BARS SET - Type A	HCDCBHA055-BI000501	Set 501
BUS-BARS SET - Type A	HCDCBHA055-BI000502	Set 502
BUS-BARS SET - Type A	HCDCBHA055-BI000503	Set 503
BUS-BARS SET - Type A	HCDCBHA055-BI000504	Set 504
BUS-BARS SET - Type A	HCDCBHA055-BI000505	Set 505
BUS-BARS SET - Type A	HCDCBHA055-BI000506	Set 506
BUS-BARS SET - Type A	HCDCBHA055-BI000507	Set 507
BUS-BARS SET - Type A	HCDCBHA055-BI000508	Set 508
BUS-BARS SET - Type A	HCDCBHA055-BI000509	Set 509
	-	
	-	
	-	
	-	

6. Recipient contractor : ANSALDO SUPERCONDUTTORI S.p.a.

7. Contract / Order No : F462/LHC/LHC

8. Responsible person at CERN : Jean-Louis Périnet-Marquet Tel. +00 41 22 767 35 21

E-mail. Jean-Louis.Périnet-Marquet@cern.ch

9. Reference specification : LHC-MMS 99

10. Reference drawings : LHC-MMS 99 - Chapter 10

11. Part manufactured by : BINP NOVOSIBIRSK

12. Acceptance test refs : See attachment paper

13. Acceptance test results : Conform to technical specification

14. Comments : For 14 magnets type A

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

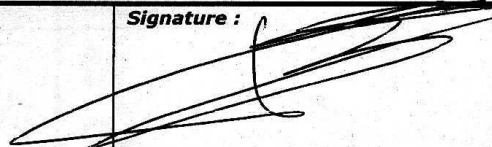
Date :

19 septembre 2005

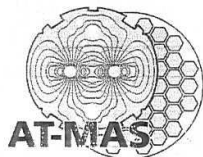
Name :

Jean-Louis Périnet-Marquet
Claude Urpin

Signature :



CERN
CH-1211 Geneva 23
Switzerland



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)	3. Part No. (10 chars)	4. Serial No. (8 chars)	5. Other identification
BUS-BARS SET - Type B	HCDCBHA056-BI000507			Set 507
BUS-BARS SET - Type B	HCDCBHA056-BI000508			Set 508
BUS-BARS SET - Type B	HCDCBHA056-BI000509			Set 509
BUS-BARS SET - Type B	HCDCBHA056-BI000510			Set 510
BUS-BARS SET - Type B	HCDCBHA056-BI000511			Set 511
BUS-BARS SET - Type B	HCDCBHA056-BI000512			Set 512
BUS-BARS SET - Type B	HCDCBHA056-BI000513			Set 513
BUS-BARS SET - Type B	HCDCBHA056-BI000514			Set 514
BUS-BARS SET - Type B	HCDCBHA056-BI000515			Set 515
BUS-BARS SET - Type B	HCDCBHA056-BI000516			Set 516

6. Recipient contractor :	ANSALDO SUPERCONDUTTORI S.p.a.		
7. Contract / Order No :	F462/LHC/LHC		
8. Responsible person at CERN :	Jean-Louis Périnet-Marquet	Tel.	+00 41 22 767 35 21
		E-mail.	Jean-Louis.Périnet-Marquet@cern.ch
9. Reference specification :	LHC-MMS 99		
10. Reference drawings :	LHC-MMS 99 - Chapter 10		
11. Part manufactured by :	BINP NOVOSIBIRSK		
12. Acceptance test refs :	See attachment paper		
13. Acceptance test results :	Conform to technical specification		
14. Comments :	For 6 magnets type B		

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

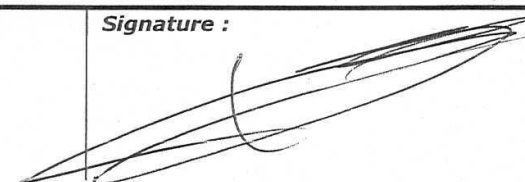
Date : 19 septembre 2005	Name : Jean-Louis Périnet-Marquet Claude Urpin	Signature : 
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Foto 1/5



Foto 2/5



Foto 3/5



Foto 4/5



Foto 5/5