

Bus Bars problems since beginning of production of cold masses at Ansaldo Superconduttori

List of non conformities opened by Ansaldo Superconduttori:

NCR98

Cold mass affected: **2010**

Description: During the assembling of cold mass nr. 2010, a dimensional check of bus-bars showed a reduced length $L=105$ mm (nom. $L=120$ mm) of the sc cable of bus-bar installed on M1 line - lyre side.

Bus bar Id.: **00000024** (type B)



NCR161

Cold mass affected: **2066**

Description: During electrical connection of bus-bars, after longitudinal welding of CM 2066, we found a deformation of the bus-bars nr.A186 for diode connection (bus-bars set nr. HCDCBHA055-BI000186). Besides this bus-bar is in contact with bus-bar nr.A186/C.

Bus bar Id.: **HCDCBHA055-BI000186 (A)**



NCR177

Cold mass affected: 30 type A and 30 type B

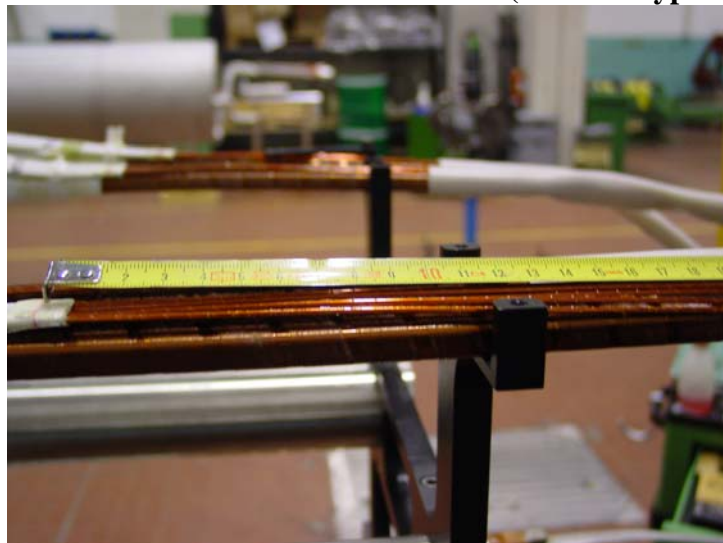
Description: With reference to dwg. nr. LHCCCHA0001-0002-0003-0004 (all rev, index D), the length of the glass cloth of auxiliary bus bars is too short (about 120mm) on both sides.

The end taping is in the position where the clamps (DWG,nr. LHCMB_E0057 & 0058) have to be mounted.

The glass epoxy plate 12x15x2.2mm (dwg. nr. LHCCCHA0003 pos.6) is missing.

Bus bar Id.: **HCDCBHA055-BI000166 to BI000195 (bus bars type A)**

HCDCBHA056-BI000181 to BI000210 (bus bars type B)



NCR227

Cold mass affected: **2087**

Description: Visual and dimensional check of bus bars installed on CM 2087 showed that the bus-bar installed on M3 line (id. nr. 193 type B) has a reduced length of the sc cable of about 10 mm (from 270 to 260 mm).

Bus bar Id.: **193 type B**

NCR229

Cold mass affected: **2103**

Description: Visual and dimensional check of bus bars installed on CM 2103 showed that the bus-bar installed on M3 line (id. nr. 194 type B) has a reduced length of the sc cable of about 10 mm (from 270 to 260 mm).

Bus bar Id.: **194 type B**

NCR267

Cold mass affected: **2137**

Description: During electrical check of bus-bar nr. B-360 (id. nr. HCDCBHA056-BI000360) just before longitudinal welding of CM 2137, a low insulation resistance has been found. Cause of this problem seems to be high humidity / water, get during transport of bus-bars. Same problem we found on bus bars regarding set nr. from A-336 to A-345 and from B-351 to B-360 (ref. to NC CERN 268)

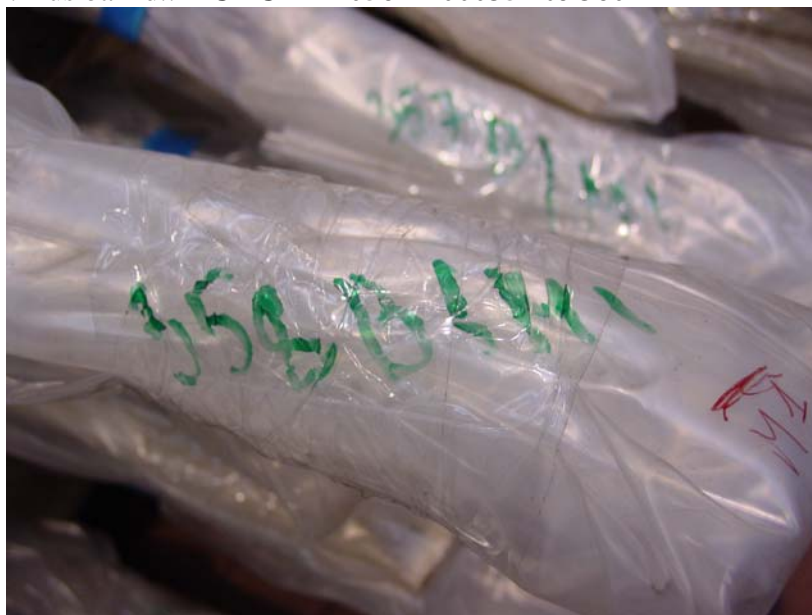
Bus bar Id.: **HCDCBHA056-BI000360**

NCR268 (See also NCR 267)

Cold mass affected: During incoming inspection of bus-bars from nr. A-336 to A-345 and from nr. B-351 to B-360, we found water inside the bus bur assembly.

Cause of this problem seems to be related to a bad storage or packaging during transport.

Description: Bus bar Id.: **HCDCBHA056-BI000351 to 360**





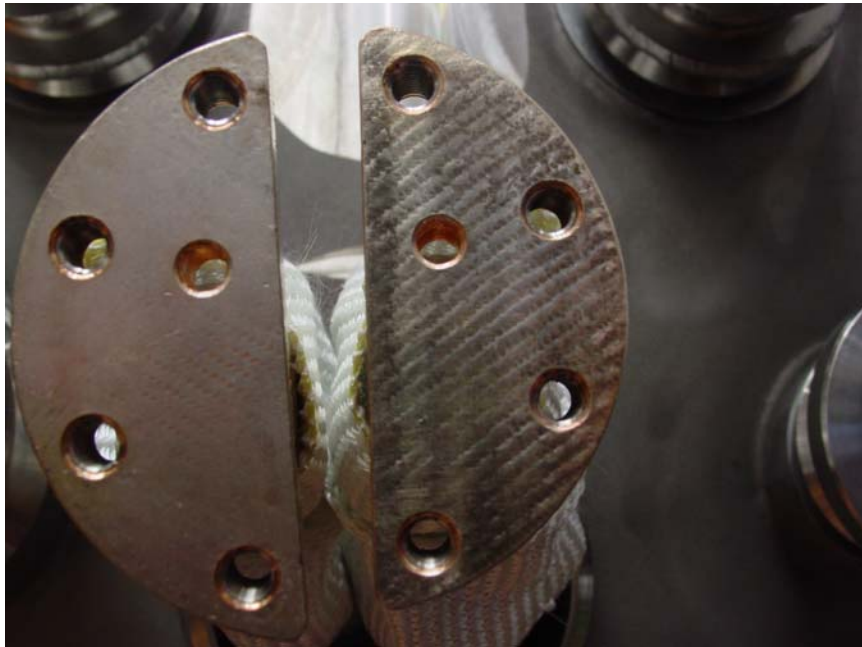
Other problems encountered:

Cleanness





Rugosity at diode connections



Bad shaping

