

# Material Certificate from CMRI, Dhanbad



के० ख० अ० सं० परीक्षण प्रकोष्ठ - CMRI TESTING CELL

केन्द्रीय खनन अनुसंधान संस्थान

(वैज्ञानिक, तथा औद्योगिक अनुसंधान परिषद)



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**CENTRAL MINING RESEARCH INSTITUTE**

(Council of Scientific & Industrial Research)

बरवा रोड, धनबाद - 826 001 (INDIA)

परीक्षण प्रमाण पत्र - TEST CERTIFICATE

(FORM NO. CMRI: DGM: FLP: F: IS: REV-02)

ID NO.: 473/04

Code No. FLP/194/2004

### REPORT OF NON-SPARK TEST

[Accompanies this Office Letter No. CMRI/TC/P/1135/9 dated 15<sup>th</sup> March, 2005 and pertains to the report of testing on the sample of Non Sparking material as per IS: 4595-1969.]

### NAME & ADDRESS OF THE APPLICANT & MANUFACTURER:

M/s. SOLSONS EXPORTS PVT. LTD.,  
Varun 37, Shrimali Socy.,  
Navrangpura, Ahmedabad-380009  
Gujarat.

**NAME OF THE SAMPLE & COMPOSITION DECLARED BY THE MANUFACTURER:** Non-Sparking sample made of different composition in Size of 6mm dia. & 50mm length as per the composition given below. (No sample of the alloy was drawn from the non-sparking material for verifying its chemical composition declared)

Aluminium	-	9-12%
Nickel	-	2-5%
Manganese	-	1.5% (Max.)
Iron	-	1-3%
Copper	-	Balance

**Date of Test:** 02.03.2005

**TEST CARRIED OUT:** The test for non-sparking sample is carried out as per clause 9.1 of IS: 4595-1969.

**TEST RESULT:** The sample did not produce the incendeive spark during the test and no explosion was occurred in the explosion chamber. Thus the alloy sample is characterized to be Non-Sparking as defined in IS: 4595-1969.

### EQUIPMENT USED & THEIR CALIBRATION STATUS:

- A Fabricated unit for Non-Sparking Tools test apparatus.
- Oxygen analyzer

**Note:** Calibration where performed as per in house procedure and are within permissible range.

**STANDARD USED FOR TESTING:** IS: 4595-1969 (General requirements for Non-Sparking tools)

**CONDITION OF TESTING:** The environment inside the chamber consists of 20cm<sup>3</sup> gasoline and air mixture containing 50% oxygen.

**TEMPERATURE:** Ambient temperature of 30 degree C.

**COMMENTS IF ANY:** NIL



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Continuation Sheet

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### CONCLUSION:

Non-Sparking sample made of Aluminium-Copper-Nickel-Manganese-Iron meets the test requirements of clause 9.1 of IS: 4595-1969 and above mentioned material may be termed as "Non-Sparking" material.

### RECOMMENDATIONS TO THE STATUTORY BODIES/ENTRY USERS ETC.:

The sample falls under Non-Sparking Category.

Reported by

(B. AHIRWAL)  
Scientist

Dated: 11<sup>th</sup> March, 2005  
Flame & Explosion Laboratory,  
Central Mining Research Institute, (CSIR)  
Barwa Road, Dhanbad -826001,  
Jharkhand, (India).

Approved by

(A. K. SINGH)  
Head Of The Department

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परीक्षण प्रकोष्ठ  
H.O.D.  
Testing Cell