

केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

बरवा रोड, धनबाद - 826 001, झारखण्ड, भारत



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Central Institute of Mining and Fuel Research

Formerly : Central Mining Research Institute
(Council of Scientific & Industrial Research)
BARWA ROAD, DHANBAD-826 001, JHARKHAND, INDIA

REGISTERED POST/COURIER SERVICE

No. CIMFR/TC/SR/H1259
I.D. No. 1015/07

Dated: 31st March, 2008
CODE NO. FLP/221 (R)/08

To
M/S. BALIGA LIGHTING EQUIPMENTS PVT. LTD.,
389, MEDAVAKKAM ROAD, KOVILAMBAKKAM,
CHENNAI-600 117

Sub: Supplementary Testing for **REVALIDATION** as per IS: 2148-2004 (IEC 60079-1/2001) of your **Flameproof/Weatherproof Traffic Light** in cast aluminium alloy LM-6 construction, designated by **Cat. No.: FTL-503** for use in Zone 1 & 2 and Gas Groups: IIA & IIB atmosphere only.

- Report on (REVALIDATION)

Your Ref. Appl. No.: CMRI/6/292/IIB

Dated: 27/12/2007

Dear Sir,

Please find enclosed the **Supplementary Test Report** for **REVALIDATION** of the above sample as per IS: 2148-2004.

The above apparatus was earlier certified as per IS: 2148-1981 vide CMRI Test Report No. CMRI/TC/P/349, Dated: 02/05/2002.

Charges of **Rs. 9,259/- (Rupees Nine thousand Two hundred Fifty Nine only)** including applicable service charges involved towards the testing/issuing the schedule have been adjusted against the advance deposit made by you.


Kindly arrange to collect the sample within 90 days from the date of receipt of this letter failing which CIMFR would dispose off the sample by public auction without any further NOTICE to you.

Kindly acknowledge receipt.

Thanking you,

Yours faithfully,

Encl.: As above
Suppl. Report for Revalidation in Triplicate
Copy to: 1. Head, Flame & Explosion Lab.
2. Bill Section.


(G. M. PRASAD)
HEAD OF THE DEPARTMENT
TESTING CELL

Page 1 of 6

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कार्यालय के दिन : सोमवार से शुक्रवार तक Working days : Monday to Friday



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परीक्षण प्रमाण पत्र - TEST CERTIFICATE

FORMAT NO. (CIMFR: DQM: FLP02: F-03)
(Flame & Explosion Laboratory)

I.D. No.1015/07

CODE NO.FLP/221 (R)/08

[For association with the Report of Supplementary Testing for **REVALIDATION** sent (under cover of this Office Letter No. CIMFR/TC/SR/H/125) Dated 31st March, 2008) to M/S. Baliga Lighting Equipments Pvt. Ltd., 389, Medavakkam Road, Kovilambakkam, Chennai-600 117 in respect of the equipment mentioned below]

FIRST SCHEDULE

- 1. Applicant:** M/s. Baliga Lighting Equipments Pvt. Ltd.,
389, Medavakkam Road, Kovilambakkam,
Chennai-600 117
- 2. Manufacturer:** Same as above
- 3. Title of Apparatus:** Flameproof/Weatherproof Traffic Light in cast aluminium alloy LM-6 construction.
- 4. Cat. No./Model No.:** Cat. No.: FTL-503
- 5. Zone & Gas Groups:** Zone 1 & 2, and Gas Groups: IIA & IIB atmosphere.
- 6. Standard Reference:** IS: 2148-2004 & IS: 13346-2004.
- 7. Rating:** Rated at upto 12V DC or 110V/230V AC, 50Hz, 7 to 10W
- 8. Temperature Class:** See Table#2
- 9. Earlier Prototype Test Certificate No. & Date:**
CMRI/TC/P/349, Dated: 02/05/2002 (Prototype Test Report)
- 10. Supplementary/Addendum Certificate No. & date, if issued earlier:** NA

11. Drawings:

(A) Old certified Drawing as per IS: 2148-1981:

Sl. No.	Drg. No.	Rev.	Sheet	Date
1.	FFTL-503001	1	1 of 1	21/03/2002

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(B) Drawing submitted for Revalidation as per IS: 2148-2004:

Sl. No.	Drg. No.	Rev.	Sheet	Date	Title
1.	FFTL-503001	2	1 of 1	27.12.07	Flameproof/Weatherproof Traffic Tight

12. Physical examination of the apparatus w.r.t. IS 2148: 2004: The apparatus under reference has been physically verified along with the above design drawing for the flame paths and other dimensional requirements and complies with the requirements of IS 2148: 2004 with respect to Gas Groups: IIA & IIB atmosphere only.

13. If any, other relevant information: The apparatus under reference is already tested & certified for weatherproof protection (IP-65) as per IS: 13947 (Part-1) -1993 and it is also acceptable as per IS: 12063-1987. The present equipment was earlier certified as per IS: 2148 - 1981. Now the same is revalidated as per IS: 2148-2004. The material of construction of the apparatus is cast aluminium alloy LM-6 and the composition of cast aluminium alloy LM-6 is given in the drawing. However no sample of the alloy was drawn from the prototype enclosure for verifying its chemical composition as declared by the manufacturer. The main chamber having three nos. of glass window (Ø90X8 each). The Gross Volume & Net Volume of the enclosures are as given below:

Enclosures	Gross Volume	Net Volume
Main Enclosure	2695 cc	2395 cc
Terminal Enclosure	875 cc	830 cc

For further details the drawing may be consulted.

14. Scope of certificate: Certificate issued by the certifying authority testify that the apparatus has been found to comply with the Definition of Flameproof Enclosure contained in the relevant Indian Standard specification. They do not vouch for the quality of the equipment in any other respect.

This Institute reserves the right to review, amend or withdraw this Supplementary Test Report for Revalidation at any time, if considered necessary in the interest of safety.

SECOND SCHEDULE

The following are alternative permissible variation to otherwise identical apparatus covered by this Test Report:

Alternatively the Flameproof/Weatherproof Traffic Light may be designed as follows when provided with one or two or three glass housing in the Main Chamber. For further details mentioned in the drawing:

- 1) Cat. No.: FTL-501 - One Glass Window with LED cluster with polarity feature reversing for alternating between Red, Amber & Green.
- 2) Cat. No.: FTL502 - Two Glass Window with Red & Green LED cluster.
- 3) Cat. No.: FTL503 - Three Glass Window with Red, Amber & LED cluster.

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I.D. No:1015/07

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Test equipment used:

- (i) Computer, Kistler Piezo Electric Transducer & Charge Amplifier for conducting Explosion Pressure Tests.
(ii) Impact Test set up.

Environmental condition where applicable: NA

Conclusion: The **Flameproof/Weatherproof Traffic Light** in cast aluminium alloy LM-6 construction, designated by **Cat. No.: FTL-503**, under reference complies with applicable requirements of IS: 2148-2004 in respect of flameproofness, IS: 13346-2004 in respect of general requirements and temperature class suitable for use in Zone 1 & 2 and Gas Groups: IIA & IIB atmosphere only.

Reported By

Arvind Kumar
(ARVIND KUMAR)
Group III(1)

Dated: 24th March, 2008
Flame & Explosion Laboratory
Central Institute of Mining & Fuel Research, (CSIR)
(Formerly: Central Mining Research Institute)
Barwa Road, DHANBAD - 826 001,
(JHARKHAND) INDIA

Approved By

A. K. Singh
(A. K. SINGH)
Head of the Department

Guar
विभागाध्यक्ष
परीक्षण प्रकोष्ठ
H.O.D.
Testing Cell