

के० ख० एवं ई० अ० सं० परीक्षण प्रकोष्ठ—CIMFR TESTING CELL

केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)



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CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH

FORMERLY : CENTRAL MINING RESEARCH INSTITUTE
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

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परीक्षण प्रमाण पत्र—TEST CERTIFICATE

[FORM NO.: CIMFR: DQM: FLP02: F-02]
(Flame & Explosion Lab.)

ID NO. 400/13

CODE NO. FLP/99/13-14

FIRST SCHEDULE

[For association with the report of test sent (under cover of this office Letter No CIMFR/TC/P/1566 Dated 30th December, 2014) to M/s. Trolex Ltd., Newby Road, Hazel Grove, Stockport, SK7 5 DY UK, in respect of testing as regards to intrinsic safety of the equipment mentioned below submitted by them for testing]

NAME & DESCRIPTION OF THE APPARATUS: The name of the apparatus is **TX5630 Series Accelerometer.**

The TX5630 Series Accelerometers are designed to measure velocity or acceleration by converting the signal generated by the compression of a piezo electric crystal by a given seismic mass and output a 4-20mA signal proportional to velocity or acceleration to the monitoring equipment. The accelerometer comprises a piezo electric crystal connected to a signal conditioning board all contained within a stainless steel enclosure of various shapes measuring approximately 33cm³. The enclosure is fully welded construction. The electrical connections are made to the apparatus either via an IP65 rated connector or via an integral cable which is encapsulated in the end of the apparatus.

The Group I version of the apparatus with 100m of cable (either integral or attached to the connector) has the following entity parameters:

U_i = 16.5V
P_i = 1.74W
C_i >>> = 16nF (Polyurethane Cable), = 37nF (Silicon Cable), = 29nF (Armoured cable)
L_i/R_i >>> = 8.32μH/Ω (Polyurethane Cable), = 15.4 μH/Ω (Silicon Cable), = 15.4 μH/Ω (Armoured cable)

The TX5630 Series Accelerometers must be powered from a power limited source such as an appropriately certified fuse assembly containing a ≤62mA fuse, 1.74W (16.5 x 62mA x 1.7).

Encapsulation is used to seal the back of the cable entry or integral connectors to maintain the IP65 rating of the apparatus and provide improved thermal properties of small component within the assembly.

APPLICANT:

M/s. Trolex Ltd.,
Newby Road, Hazel Grove,
Stockport, SK7 5 DY
UK.

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2 of 7