



CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH

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(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

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परीक्षण प्रमाण पत्र - **TEST CERTIFICATE**

[FORM NO.: CIMFR: DQM: FLP02: F-02]

(Flame & Explosion Lab.)

I.D No. 406/13

CODE NO FLP/99H/13-14

FIRST SCHEDULE

[For association with the report of test sent (under cover of this office Letter No CIMFR/TC/P/H630 Dated 26th December, 2013) 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 **TX6373 Toxic Gas Sensor/Transmitter.**

The TX6373 Toxic Gas Sensor/Transmitters take a signal from an electrochemical gas sensing head mounted on the sensor board. This signal is conditioned and an analogue signal is then transmitted to other monitoring equipment. The apparatus comprises an output board connected to sensor head boards and an optional display board. The assembly is housed in an anti-static plastic enclosure and a polycarbonate window is fitted to allow viewing of the liquid crystal display. The gas sensing head of this equipment is certified for intrinsic safety by sira having EC Type-Examination Certificate Number Sira 02ATEX2052X. There are two version of this sensor/transmitter i.e. TX6373.01-with fixed sensor head and TX6373.84.01-with remote sensor head. There are following versions of the TX6373.01 applicable for Gas Group I

TX6373.01.11 (Group I, 0.4 to 2V Output): The safety parameters for input power (terminal T4/T3) of this version are $U_i=16.5V$, $C_i=0$ and $L_i=0$ where as for sensor output signal (terminal T1/T2) $U_o=5.88V$, $I_o=24mA$, $P_o=35mW$, $C_o=9.7\mu F$ and $L_o/R_o \leq 40\mu H/\Omega$. The 0.4-2V output versions may be connected to supplies derived from a single power source or from a two separate power sources. Where two separate power sources are used, the power and signal circuits must be separately certified and approved intrinsically safe circuits.

TX6373.01.12 (Group I, 4 to 20 mA Output (2 Wires)): The safety parameters for input power/signal (terminal T4/T1) of this version are $U_i=16.5V$, $C_i=50nF$ (In addition to the terminal capacitance at the supply voltage, for system assessment purposes, the installer should note that there is a terminal capacitance of $7.0\mu F$ at $7.08V$) and $L_i=0$.

TX6373.01.13 (Group I, 5 to 15 Hz Output): This version is having $U_i=16.5V$ and $U_o=0V$. The 5-15Hz output version may be connected to supplies derived from a single power source or from a two separate power sources. Where two separate power sources are used, the power and signal circuits must be separately certified and approved intrinsically safe circuits.

Out of the above three versions, version TX6373.01.11.250.50 and TX6373.84.01.12.250.50 are submitted for test at CIMFR and covered under the scope of this report.

Jsk