EGU HV Laboratory a.s.

E G U – H V Laboratory a. s., Podnikatelská 267, 190 11 Praha 9, Běchovice

HIGH VOLTAGE TESTING LABORATORY

Accredited testing laboratory No.: 1029
Accredited by Czech Accreditation Institute
according to ČSN EN ISO/IEC 17025:2005

L 1029

TEST REPORT No.: 10923/A/18

CUSTOMER:	EMCO INDUSTRIES Ltd. 4th Floor, National Tower 28-Egerton Road, Lahore 54000 PAKISTAN
TEST OBJECT:	Fog type suspension insulator 100 kN
TYPE SPECIFICATION:	EM-369P
TEST STANDARDS:	IEC 60507 Ed.3.0:2013

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Test engineer

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Director of EGU - HV Laboratory a. s.

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1 TESTS PERFORMED

1.1 Artificial pollution test – solid layer method

1.1.1 Test procedure

The test was carried out according to IEC 60507, clause 6.7.3 - Procedure B - Wetting after energization and Annex B.3 Determination of the 50% withstand voltage.

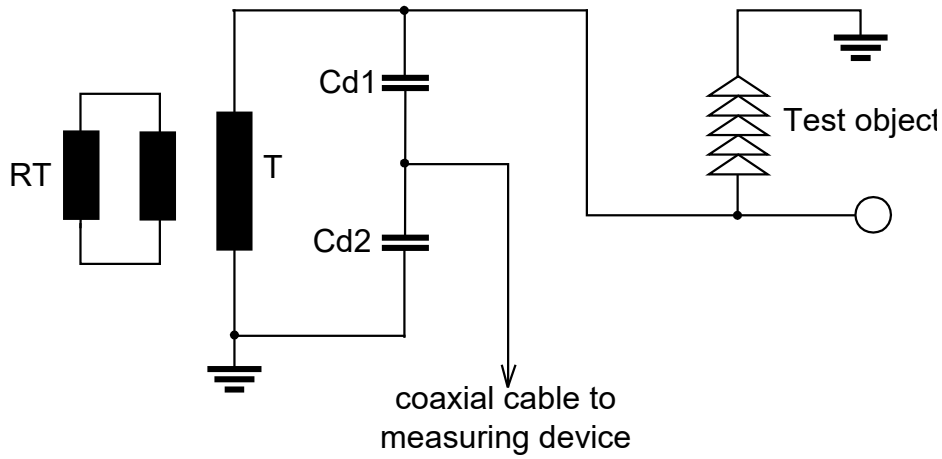
The insulator string consisting of 5 insulators was subjected to 10 useful tests. The voltage was maintained for 100 minutes or until flashover after the fog generation. The test followed up and down method of voltage application with about less than 10% voltage step.

The insulators were polluted by the painting the specified pollution slurry which consisted of Kaolin, salt, $CaSO_4$, $CaCO_3$ and water. The amount of mixed salt was adjusted to obtain the specified equivalent salt deposit Density (ESDD) of 1,0 mg/cm^2. The non-soluble deposit density NSDD was 8,0 mg/cm^2.

The polluted insulators were installed in vertical position in the fog chamber as shown in Figure 2. The clean fog was generated into the chamber without the direct spraying over the insulator.

The 50% flashover voltage and standard deviation were calculated based on the results of up and down method.

Testing and measuring equipment:



T - test transformer TuR Dresden 200 kV, 2000 kVA, serial No. 862514
RT – regulation transformer TuR Dresden 6/0-6 kV, serial No. 870786
Cd1/Cd2 - capacitive divider TuR Dresden, type MCF 600, serial No. 863705
universal voltmeter Haefely Trench, type DMI 551, serial No. 150505
digital stop-watch Olympia, type Sport, PM-173
measuring cylinder 1000ml, identification No. 2/044/11
water flowmeter Sensus, serial No. 9784547
Steelyard (electronic weight), serial No. WC0318449
conductivity meter WTW, Cond 3110, serial No. 11060082
conductivity meter WTW, Cond 3310, serial No. 10410891

4 PRODUCT DRAWING

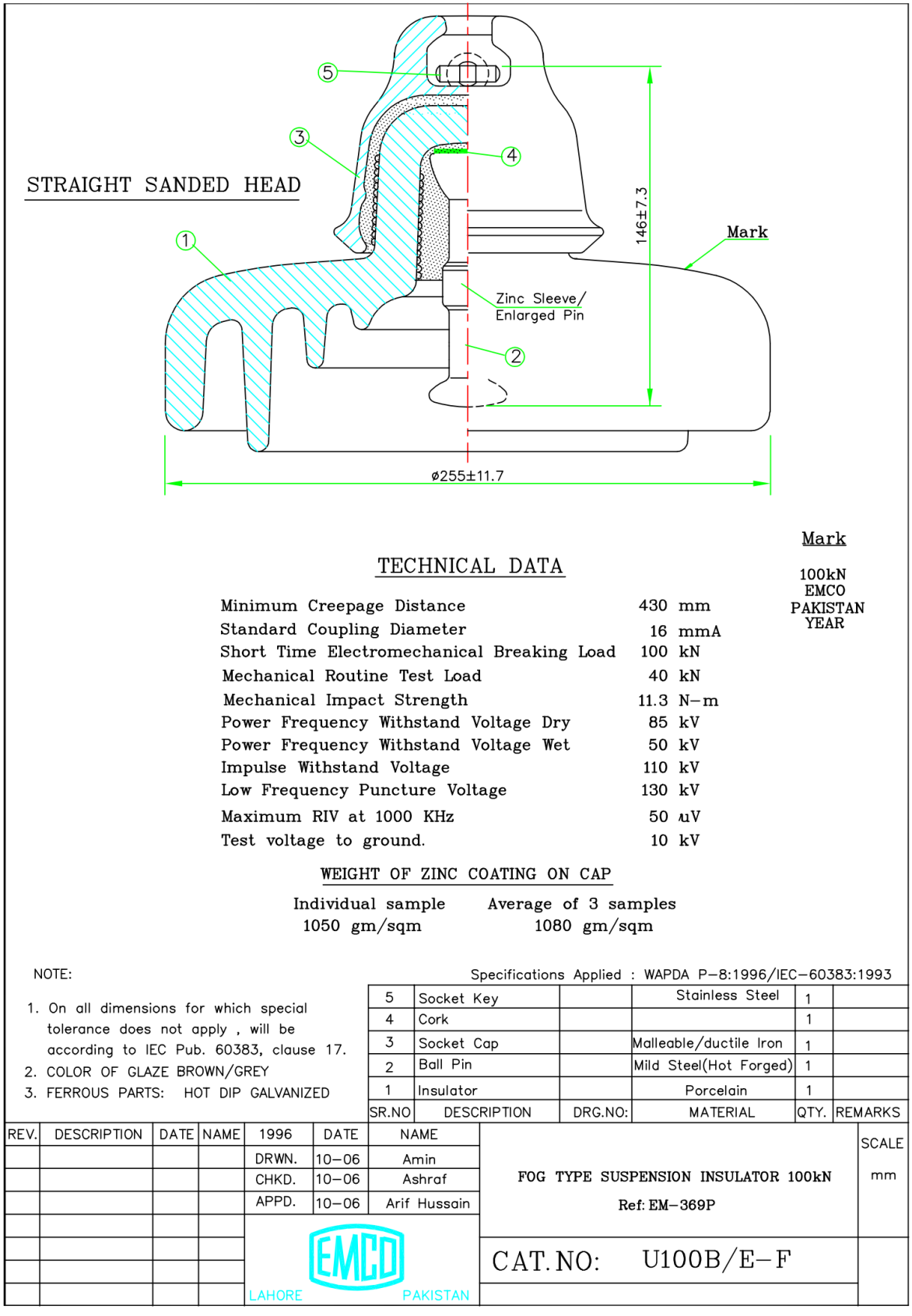


Figure 1
Fog type suspension insulator 100 kN, type EM-369P, cat. No. U100B/E-F

5 TEST OBJECT AND TEST SETUP PHOTOS

Figure 2
Fog type suspension insulator 100 kN, type EM-369P, cat. No. U100B/E-F tested string placed in the chamber before the test

- end of test report -