IP TEST REPORT

Project No.: *TI-2071-I62208*

Equipment Under Test: *LV Panel (Empty Enclosure)*

Model/Type	:	*ESLP*
S/N	:	*932*
Rating	:	*400V; 32A*

Manufactured by: *PARS SWITCHBOARD*

Applicant: *PARS SWITCHBOARD*

Tested According to: *IEC 60529 Ed2.2: 2013 and IEC 62208: 2011*

Issue Date: *24-Aug-2014*

No. of pages: *11*

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Technical Department ISO IEC 17025 Accredited Lab

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1. GENERAL INFORMATION

1.1 Product Information

Equipment Under Test	: LV Panel (Empty Enclosure)
Model/Type	: ESLP
Rating(s)	: 400V ; 32A
Normative document	: IEC 60529 Ed2.2 – 2013 and IEC 62208 - 2011

1.2 Client Information

Applicant	: PARS SWITCHBOARD
Telephone	: +98 21 66707010

1.3 Tests Performed

Marking	
IP5X, Test for Protection Against Dust	20-Aug-2014
IP5X, Test for Protection Against Access to Hazardous Parts	20-Aug-2014
IPX4, Test for Protection Against Water	20-Aug-2014
	20-Aug-2014

1.4 Results of Tests

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2. PERFORMANCE AND RESULTS OF TESTS

2.1. Marking:

2.1.1 Test data

Location	: E.P.I.L.
Date	: 20-Aug-2014
Engineer of EPIL	: B. Hamidifard
Normative document	: IEC 60529 Ed2.2 – 2013

2.1.2 procedure of test

Compliance with The requirements of sub clause 10, IEC 60529 for marking shall be specified in the relevant product standard.

2.1.3 Acceptance conditions of test

Compliance with the requirements of sub clause 10 of IEC 60529 had checked by inspection.

2.1.4 Result of test

Test was done according to IEC 60529, sub clause 10 and it passed the test.

✓ **PASSED**

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2.2 IP5X , Test for Protection Against Dust

2.2.1 Test data

Location	: E.P.I.L.
Date	: 20-Aug-2014
Engineer of EPIL	: B. Hamidifard
Normative document	: IEC 60529 Ed2.2 2013 and IEC 62208 - 2011

2.2.2 Ambient conditions

Ambient Temperature	: 29.6 °C
Relative Humidity	: 33 %
Atmospheric Pressure	: 86.5 kPa

2.2.3 Instrument used for the test

Dust Chamber

2.2.4 Procedure of test

The enclosure under test is placed in its normal operating position in dust chamber and the powder circulation pump worked. Talcum powder shall be used. The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50 µm and the nominal width of a gap between wires 75 µm. The amount of talcum powder to be used is 2 kg per cubic meter of the test chamber volume. It shall not have been used for more than 20 tests (according to IEC 60529). The duration of the test was 8 h (according to IEC 60529).

2.2.5 Acceptance conditions of test

Ingress of talcum powder is verified by using a watch glass installed at the centre of the base of the protected space of the enclosure in order to pick up the talcum powder entering the protected space during the test. After the test, talcum powder shall not form deposits of more than 1 g/m^2. In practice the weight of the watch glass is measured before and at the end of the test and the difference between both measures is representative of the amount of the talcum powder which has entered the protected space.

2.2.6 Result of test

The test was done according to IEC 62208 and it passed the test.

✓ PASSED

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2.3 IP5X, Test for Protection Against Access to Hazardous Parts

2.3.1 Test data

Location	: E.P.I.L.
Date	: 20-Aug-2014
Engineer of EPIL	: B. Hamidifard
Normative document	: IEC 60529 Ed2.2 - 2013 and IEC 62208 - 2011

2.3.2 Ambient conditions

Ambient Temperature	: 29.6 °C
Relative Humidity	: 33 %
Atmospheric Pressure	: 86.5 kPa

2.3.3 Instrument used for the test

Standard rigid steel rod 1 – 1.05 mm diameter (figure D of table VI - IEC60529).

2.3.4 Procedure of test

The standard probe is pushed against any openings of the enclosure with the force 1±10%N.

2.3.5 Acceptance conditions of test

Clause 15 of IEC 60529:1989 applies. The access probe shall not touch the surface of the protected space. (according to IEC 62208).

2.3.6 Result of test

Test was done according to IEC 62208 and it passed the test.

✓ PASSED

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2.4 IPX4, Test for Protection Against Water

2.4.1 Test data

Location	: E.P.I.L.
Date	: 20-Aug-2014
Engineer of EPIL	: B. Hamidifard
Normative document	: IEC 60529 Ed2.2 2013 and IEC 62208 - 2011

2.4.2 Ambient conditions

Ambient Temperature	: 29.6 °C
Relative Humidity	: 33 %
Atmospheric Pressure	: 86.5 kPa

2.4.3 Instrument used for the test

Spray nozzle of water

2.4.4 Procedure of test

The enclosure under test is placed in its normal operating position under the spraying with spray nozzle (According to IEC 60529).

The duration of the test was 1 min/m² at least 5 min (water flow rate:10 L/min ±5%, according to IEC 60529).

For doors or covers intended to accommodate equipment, a strip of paper, bent to form a 90 ° angle profile, is attached to the base of the declared protected space for that surface. The paper should project from the surface equal to the depth of the protected space or a maximum of 30 mm. Where the enclosure has any uncovered aperture, a section of absorbent paper, equal to or greater than the size of the aperture, is positioned on the surface of the protected space in its immediate vicinity.

2.4.5 Acceptance conditions of test

After the test, water shall not have ingressed into the protected space. Ingress of water is verified by the use of dry absorbent paper positioned to occupy the base area of each protected space. Immediately after the test, all indicator papers shall still be dry. In practice, a coloured blotting or filter paper will show very clearly any moisture by its discolouration. (According to IEC 62208).

2.4.6 Result of test

Test was done according to IEC 62208 and it passed the test.

✓ PASSED

3. FIGURES:

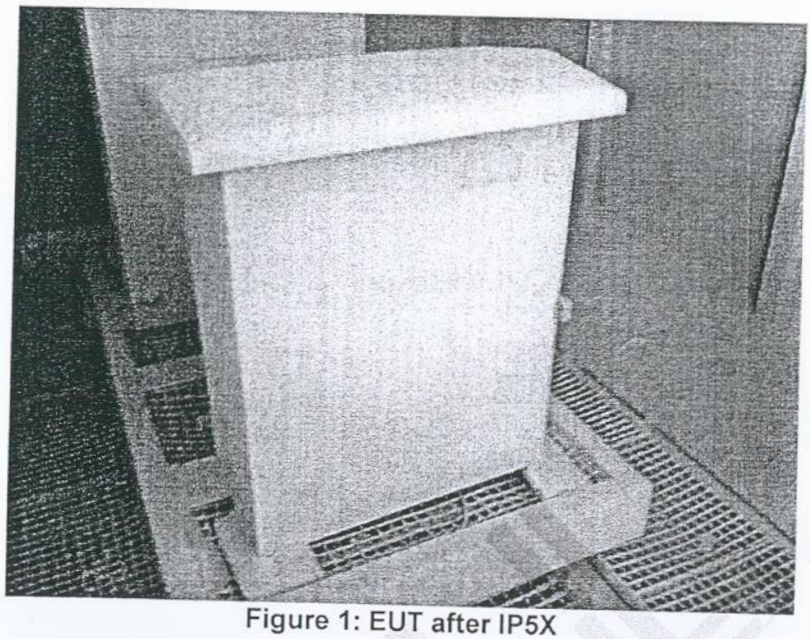


Figure 1: EUT after IP5X

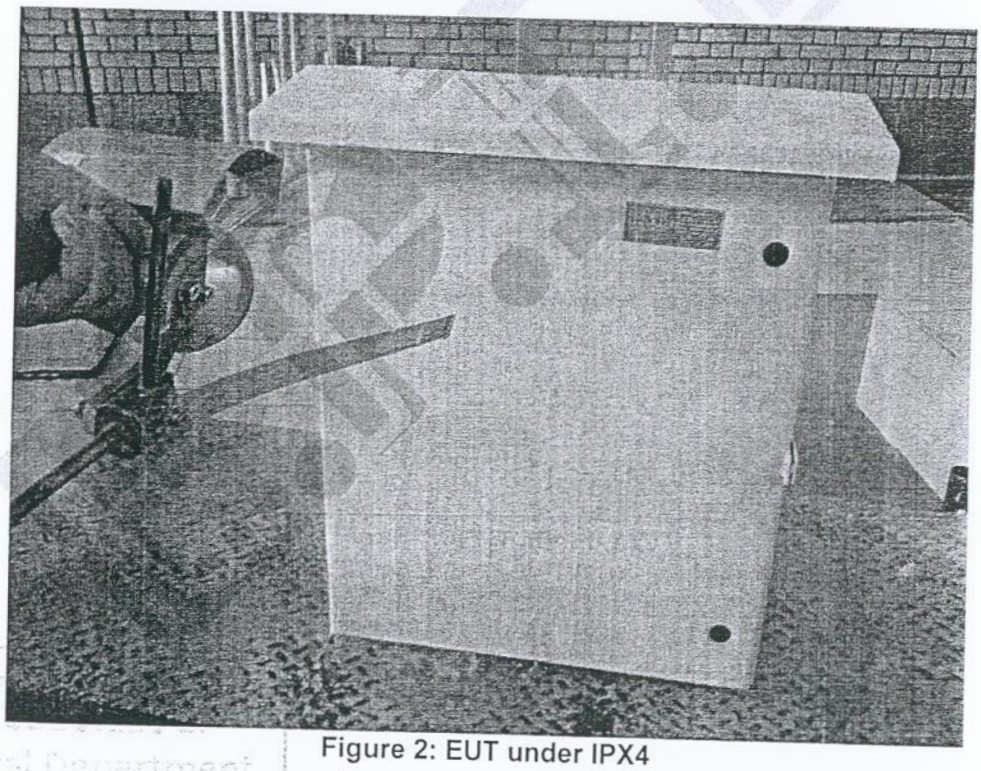


Figure 2: EUT under IPX4

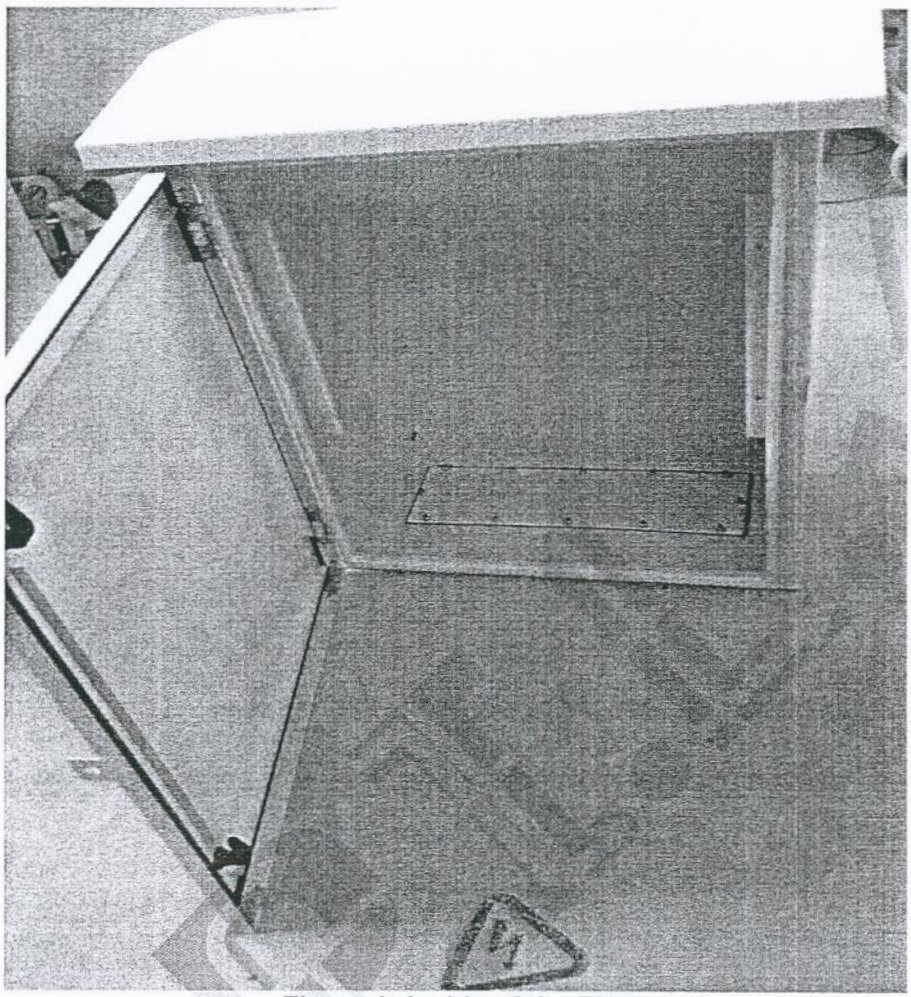
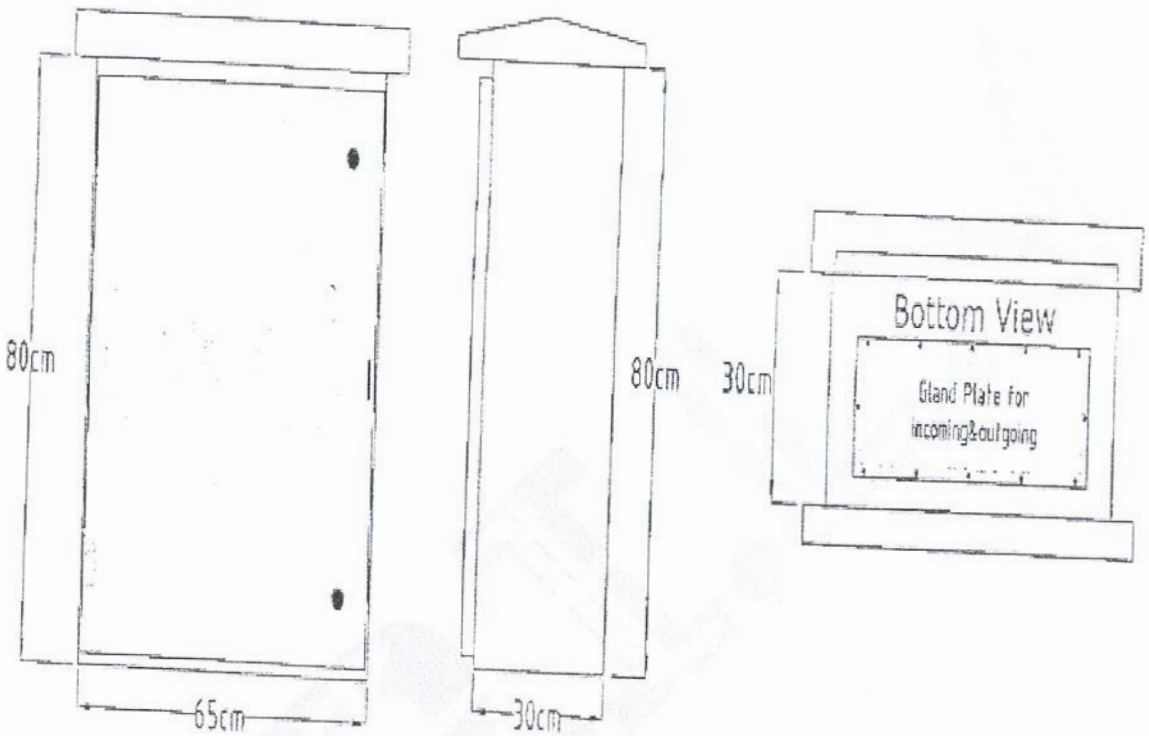
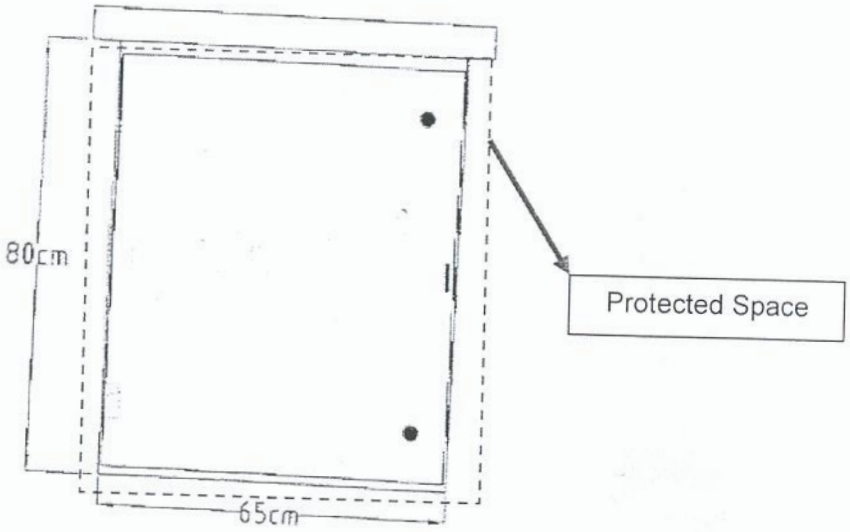


Figure 3: Inside of the EUT

4. ANNEXES:



Annex A



Annex B: Protected Space