H.V. TEST REPORT

Project No.: TH13-70005

Equipment Under Test	:	Busbar Support
Code	:	30P270/211/306
Rated Voltage	:	---
Length	:	271 mm
Width	:	40 mm
Trade Mark	:	

JEBAL
ELECTRO JEBAL IRANIAN KAVIR
الکترو جبال ایرانیان کویر

Manufacturer: Electro Jebal Iranian Kavir
Applicant: Electro Jebal Iranian Kavir
Address: Shenzar industrial Zone , 35 km of imam Reza highway , Tehran – Iran
Tel.: +98(21)66349469
Tested According to: IEC 61439-1:2020 and Client request
Date of Sample Receiption: 14-Mar-2022
Date of Tests: 09- May -2022
Date of Issue: 16-May-2022
Total Number of Pages: 9

Tested by: Technical Expert
A. Massahi

Verified by: Technical Manager
A. Takzare

Approved by:

Deputy of Test and Inspection
Prof. B. Vahidi / Prof. S. H. Fathi

Chief Executive Officer
S. M. Mirsadri

The statement of conformity decision on the measured values is made based on guard band w=U, r=1 rule (ISO/IEC Guide 98-4). The specific false accept/reject risk is up to 2.5%.

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1. GENERAL INFORMATION

1.1. Product Information

Equipment under Test	: Busbar Support
Manufacturer	: Electro Jebal Iranian Kavir
Code	: 30P270/211/306
Rated Voltage	: ---
Height	: 271 mm
Diameter	: 40 mm
Normative Document	: IEC 61439-1:2020 and Client request

1.2. Client Information

Applicant	: Electro Jebal Iranian Kavir
Telefax	: +98(21)66349469

1.3. Performed Tests

Test	Test According to	Result
Dry Lightning Impulse Withstand Voltage Test	IEC 61439-1:2020	Passed
Mechanical Failing Load Test – Vertical Bending	Client request	performed

1.4. Test Results and Descriptions:

See pages 4 to 6.

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2. PERFORMANCE and RESULTS of TESTS

2.1 Dry Lightning Impulse Withstand Voltage Test

2.1.1 Test data

Equipment Under Test (EUT)	: Busbar Support
Manufacturer	: Electro Jebal Iranian Kavir
Location	: E.P.I.L
Date	: 09-May-2022
Test Expert	: Mr. Massahi
Normative Document	: IEC 61439-1:2020

2.1.2 Ambient conditions

Ambient Temperature	: 27.7 °C
Relative Humidity	: 32.7 %

2.1.3 Performance of test

The test was performed according to subclause 10.9.3 of IEC 61439-1:2020 with voltages of both polarities using the standard lightning impulse 1.2/50 µs according to IEC 60060-1.

Five positive and negative impulse voltage was applied. The test voltage was determined in table 10 of IEC 61439-1.

Test configuration:

a) Between all the live parts of different potential of the main circuit connected together and exposed conductive parts.

b) Between each live part of different potential of the main circuit and, the other live parts of different potential and exposed conductive parts connected together.

For each phase, three copper bars with a cross section of 30 mm is used as the live parts of the EUT (Refer to figure 1)

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2.1.4 Acceptance criteria

For an acceptable result, there shall be no disruptive discharge during the tests:

2.1.5 Result of test

Table 1 shows the result of the test.

Table 1: Result of the lightning impulse withstand voltage test

Voltage Connected to	Earth Connected to	Voltage Applied (kV)		Result
		Polarity (+)	Polarity (-)	
R	S, T, Frame	6.35	6.35	Passed
S	R, T, Frame	6.35	6.35	Passed
T	R, S, Frame	6.35	6.35	Passed

The test was done according to IEC 61439-1:2020 and the EUT passed the test.

✓ **PASSED**

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2.2 Mechanical Failing Load Test - Vertical Bending

2.2.1 Test data

Equipment Under Test (EUT)	: Busbar Support
Manufacturer	: Electro Jebal Iranian Kavir
Location	: E.P.I.L
Date	: 15-May-2022
Test Expert	: Mr. Massahi
Normative Document	: Client request

2.2.2 Ambient conditions

Ambient Temperature	: 22.5 °C
Relative Humidity	: 29.1 %

2.2.3 Performance of test

According to client request the busbar support was subjected to a tensile load according to figure 3. The load was increased gradually from zero until the mechanical breakdown occurs.

2.2.4 Result of Test

Table 2 shows the results of the test.

Table 2: Result of mechanical failing load test

Point of Applied Tensile Load	Mechanical Failing Load (kN)	Result
Center (Figure3-a)	13.80	performed
Corner (Figure3-b)	9.84	performed

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3. FIGURES

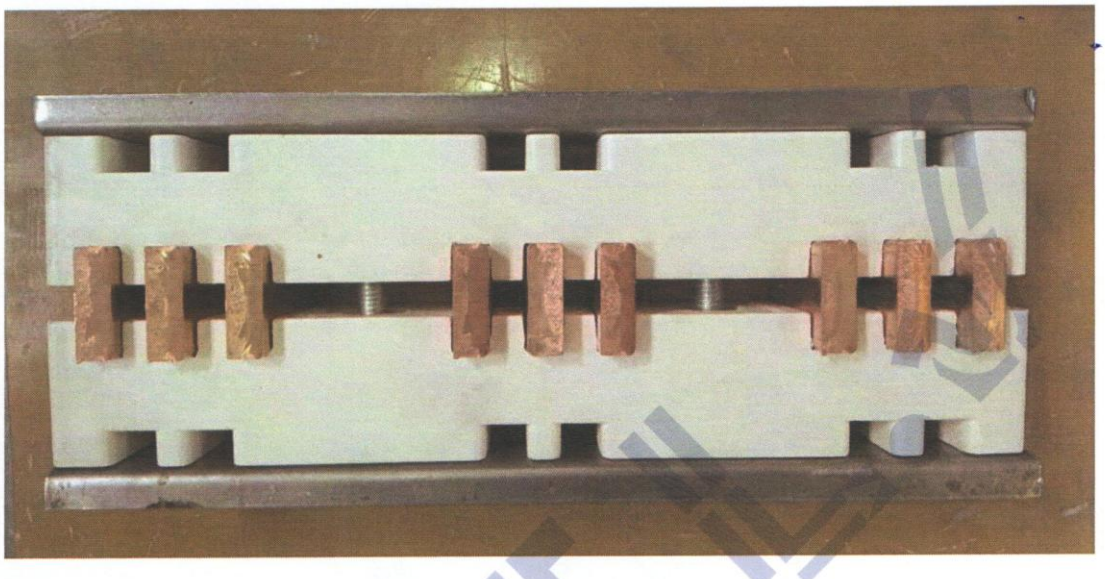


Figure 1: Equipment under test (EUT)

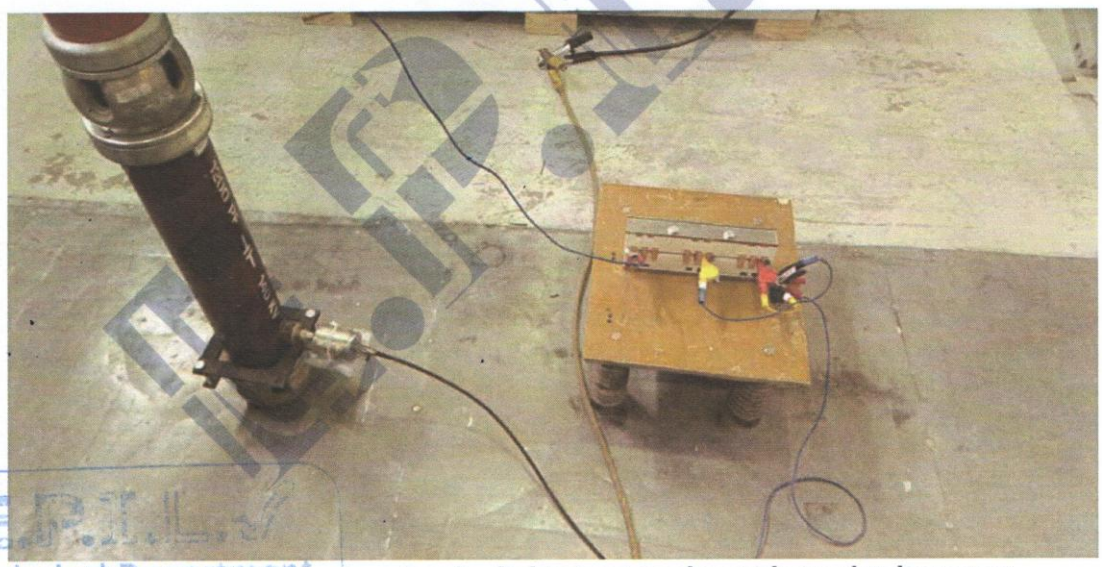
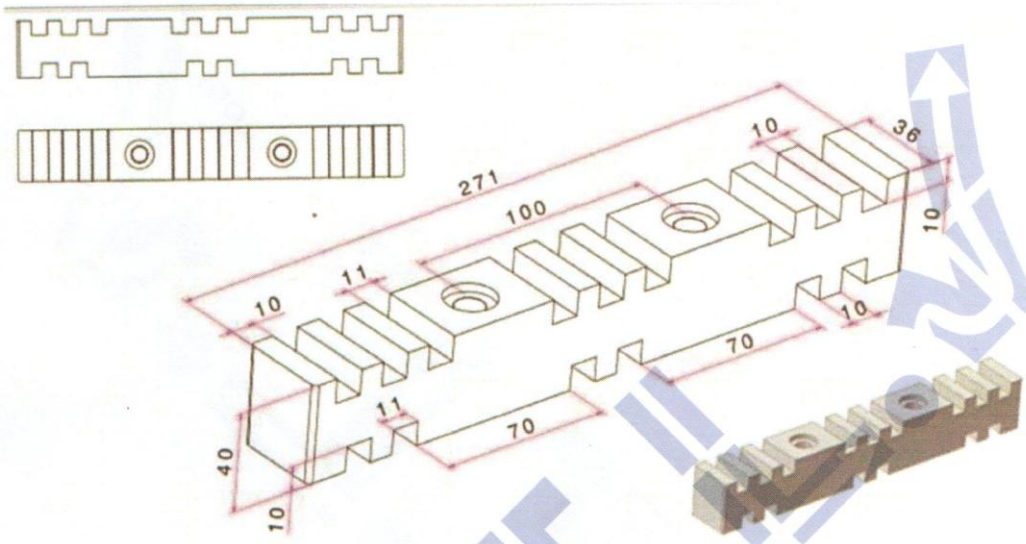


Figure 2: Equipment under dry lightning impulse withstand voltage test

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ANNEX A: Dimensions of EUT



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