

TEST REPORT

Sample: 24 kV silicone rubber Suspension insulator (DS-160660)

Manufacturer: Afra Modern Systems Company (Samanehaye Novin Afra)

Rated voltage: 24 kV

Number of sheds: 7

Creepage distance: 660 mm

Insulator material: Silicone Rubber

Test according to: IEC 61109 (2008).

By order of: Electricity Distribution Company of Moldova

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performer		Confirmed by
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1. General Information

1.1. Product Information

Equipment under test	: Silicon rubber suspension insulator
Manufacturer	: Afra Modern Systems (Samanehaye Novin Afra)
Manufacturer's address	: Block E2-79, Shiraz Especial Economic Zone (SEEZ), Fars, Iran
Silicone compound manufacturer	: Afra Modern Systems (Samanehaye Novin Afra) Company
Silicone manufacturer	: Wynca Company
The diameter of the core used	: 16 mm
Number of sheds	: 7
Rated voltage	: 24 kV
SML	: 70 kN
Creepage distance	: 660 mm
Bach number	: DS-160660-70-20-III-0001 to DS-160660-70-20-III-5000

1.2. Performed Tests

No.	Test Title	Related Standard	Test Result
Routine Test			
1.	Mechanical routine test	IEC 61109 (subclause 13.1)	passed
2.	Visual Examination Test	IEC 61109 (subclause 13.2)	passed

2. Performance and Results of Routine Tests

2.1. Mechanical routine test

- According to IEC 61109 subclause 13.1

The samples were subjected to RTL tensile force at $0.5 \times SML$ ($0.5 \times 70 \text{ kN} = 35 \text{ kN}$) at ambient temperature for 10 s.

Acceptance Criteria: The insulators shall withstand the tensile force of the RTL for at least 10 seconds and no breakage, pull-out fittings, cracking or deformation shall not be occurred.

Result of Test (Date: 22-November-2022 to 29-November-2022):

Bach number: DS-160660-70-20-III-0001 to DS-160660-70-20-III-5000 (5000 insulators)

The insulators have passed this test. The pull-out fittings and cracking not be occurred at 35 kN.

2.2. Visual Examination Test

- According to IEC 61109 subclause 13.2

The mounting of the end fittings on the insulators were evaluated according to the drawings.

Acceptance Criteria: The insulator passed the test if the following defects are not permitted:

- Superficial defects of an area greater than 25 mm^2 (the total defective area not to exceed 0.2% of the total insulator surface) or of depth greater than 1 mm.
- Cracks at the root of the shed, notably next to the metal fitting.
- Separation or lack of bonding at the housing to metal fitting joint (if applicable).
- Separation or bonding defects at the shed to sheath interface.
- Molding flashes protruding more than 1 mm above the housing surface.

Result of Test (Date: 22-November-2022 to 29-November-2022):

Bach number: DS-160660-70-20-III-0001 to DS-160660-70-20-III-5000 (5000 insulators)

The insulators have passed this test.

3. Used measuring / testing equipment



Figure 11: Tensile Test Machine (Date of Test: 22-Novamber-2022 to 29-Novamber-2022)

Date of calibration	Serial number	Type	Equipment	#
2021/11	---	---	Tensile Tester	1

4. Product Plane

