

## TEST REPORT

<b>Customer:</b> <b>M/s. Akshar Brass Industries</b> Survey No. 238, 245, 246, Plot No.46, 47, 50, 51, Neghed Industrial Area, At Neghedi, Jamnagar, Gujarat-361006	Report No.:	<b>E-4762-M</b>
	Report Date:	01-09-2023
	Job. No.:	ELM-22-23-18339
	Sample Received Date:	19-08-2023
	Date Of Completion:	01-09-2023
	ULR No.:	TC574323000017345F

**Customer Ref. No. & Date:** AB074 16-08-2023

Samples not drawn by ELCA

**Product Specification:** --

**Sample Description:** M20xM20. Brass 90° Elbow

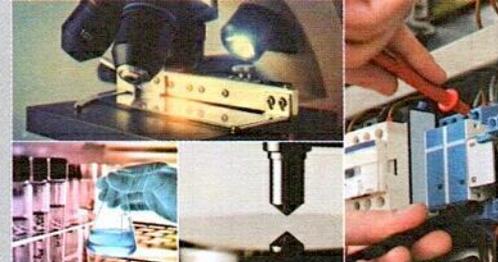
**Condition of Test Component at Receipt:** Good

DEGREES PROTECTION TEST (IP68)			
<b>Discipline</b>	Electrical	<b>Group</b>	ENVIRONMENTAL TEST FACILITY
<b>Test Method:</b>	IEC 60529:2013		
<b>Tested At</b>	ELCA Laboratories Mahape	<b>Tested on :</b>	25-08-2023

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### 1.0 GENERAL TEST DESCRIPTION

This Report presents the result of the Ingress Protection Test performed on M20xM20. Brass 90° Elbow submitted by M/s. Akshar Brass Industries. Sample is identified as **E-4762-M**.

All tests were carried out as per customer's requirements derived from the following standards.

#### APPLIED STANDARD: -

##### IEC 60529:2013

##### Degrees of Protection provided by enclosures (IP Code)

- a) Tests for protection of person against access to hazardous parts (First Numeral: 6 Category 1) as per Table No. 6 and Clause No. 12.2
- b) Tests for protection against solid foreign object (First Numeral: 6 Category 1) as per Table No. 7 and Clause No. 13.4
- c) Tests for protection against Water (Second Numeral: 8) as per Table No. 8 and clause No. 14.2.8

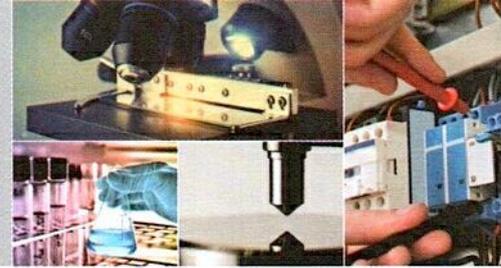
##### Acceptance conditions:

- a) Tests for protection of person against access to hazardous parts as per Clause No. 12.3
- b) Tests for protection against solid foreign object as per Clause No. 13.6.2
- c) Tests for protection against Water as per Clause No. 14.3

### 2.0 TEST DATA

Test Laboratory	ELCA LABORATORIES: Plot No. Gen-62, TTC Industrial Area, MIDC, Mahape, Navi Mumbai – 400710.
Test Date	a) Test for protection of person against access to hazardous parts on 19 <sup>th</sup> August 2023. b) Test for protection against solid foreign object on 19 <sup>th</sup> August 2023. c) Test for protection against Water on 25 <sup>th</sup> August 2023.
Tested By	Harshali Chaudhari
ELCA ID No.	E-4762-M





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### 3.0 ENVIRONMENT CONDITIONS

Tests have been performed in a controlled laboratory environment, where the environmental conditions are maintained within the applicable ranges as follows.

Ambient Temperature	15°C - 35°C
Relative Humidity air	25% - 75%
Air pressure	86 kPa to 106 kPa (860 mbar to 1 060 mbar)

### 4.0 EQUIPMENT USED

TEST	Equipment Used	ELCA ID	Calibration Due on
Ingress Protection Test (IP6X)	Rigid Steel Rod of 1.0 mm dia. Object Probe	IPD/04	02.06.2024
	Digital Push Pull Force Gauge	IPD/08	27.12.2023
	Dust Chamber	ENV/026	--
	Digital timer (Dust Chamber)	ENV/026/01	28.02.2024
	Pressure Gauge (Dust Chamber)	ENV/026/02	27.02.2024
	Vaccum Gauge (Dust Chamber)	ENV/026/03	27.02.2024
	Air Flow Totalizer	ENV/026/04	26.06.2024
Ingress Protection Test (IPX8)	Watre Tank	-	-
	Steel Scale	EL-29	14.10.2023

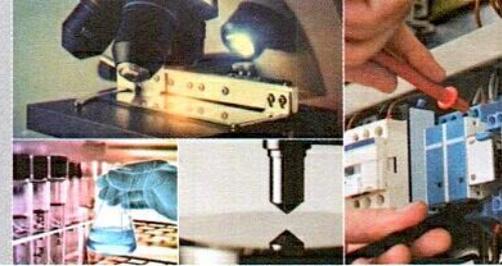
### 5.0 TEST CONDITIONS

#### Degrees of protection against Access as per Table 6

The sample was tested for protection against Access

Equipment Used	Rigid Steel Rod of 1.0 mm dia. Object Probe & Digital Push pull Force Gauge
Equipment ID	IPD/04 & IPD/08
IP code	First Characteristic numeral: 6





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### Degree of protection against foreign object as per Table 7

Exposure Period	8 hours at 20 mbar
Start time	09:30 AM on 19.08.2023
End time	05:30 PM on 19.08.2023
Equipment used	ENV/026
IP code	First Characteristic numeral: 6 Category: 1

The sample was placed in the Dust Chamber at room temperature. The test conditions are as follows: -

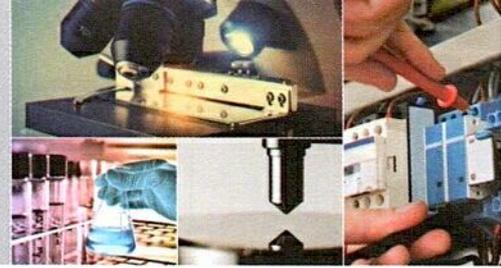
Type of dust used	Talcum powder
Size of dust	Passed through square meshed sieve of wire diameter 50µm and nominal width of a gap between wires 75 µm
Weight of dust used	3 kg. (2kg. per cubic meter of test chamber)
Chamber volume	1.5 cubic meter

### Degrees of protection against water as per Table 8

The sample was tested for water test as per following conditions:

Equipment used	Water Tank
Location of the samples	Lowest point of enclosure is located at 1.2 meter below the surface of the water
Duration of test	2 Hour





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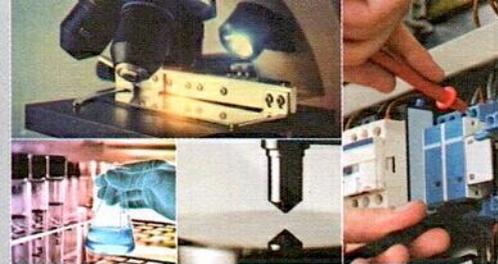
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The sample after protection against solid foreign object (dust test) inside the chamber was seen as follows:



The sample during protection against water test was seen as follows:





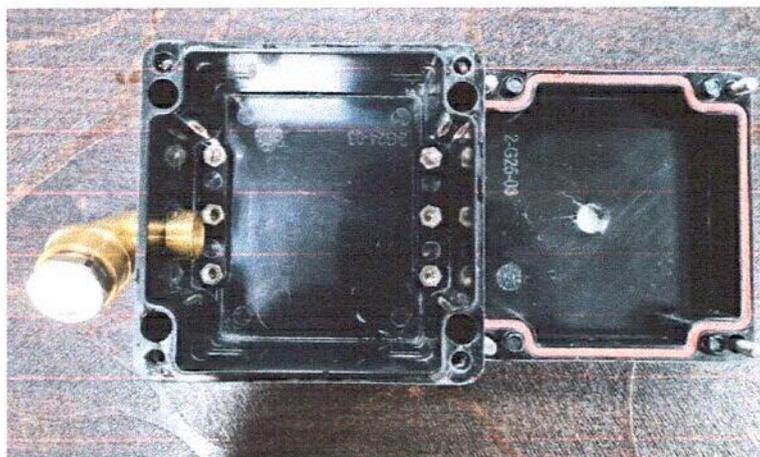
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The sample after protection against water and dust test was seen as follows:



The IP test procedure is based on IEC 60529(Degrees of Protection provided by enclosures IP Code).  
 After the completion of each test sample was visually inspected.

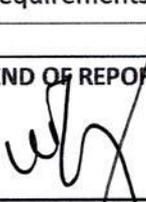


### 6.0 TEST RESULT: -

Name of test	Observations after test
Tests for protection of person against access to hazardous parts (Probe Test)	Full diameter of probe did not pass through any opening.
Tests for protection against solid foreign object (Dust Test)	No dust was observed inside the sample.
Tests for protection against Water	No Water was observed inside the sample.
<b>Parameter</b>	<b>Result</b>
<b>Remark</b>	Sample satisfies the requirements for IP68 test as per IEC 60529:2013.

\*\*\*\*\*END OF REPORT\*\*\*\*\*

  
 Checked By  
 Ajinkya Tulaskar

  
 Reviewed & Authorised by  
 Authorised Signatory  
 (N.Kalyan/Kartik K. Iyer)  
 (Proprietor/Chief Executive Officer)
