

TEST REPORT

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| | | |
|---|-----------------------|--------------------|
| Customer: M/s. Akshar Brass Industries Survey No.238,245,246, Plot No.46,47,50,51, Neghed Industrial Area, At Neghedi, Jamnagar, Gujarat-361006 | Report No.: | E-5163-M |
| | Report Date: | 27-01-2024 |
| | Job. No.: | ELM-22-23-23510 |
| | Sample Received Date: | 11-01-2024 |
| | Date of Completion: | 17-01-2024 |
| | ULR No.: | TC574324000002653F |

Customer Ref. No. & Date: 96 02-11-2023

Samples not drawn by ELCA

Product Specification: --

Sample Description: M20, Breather Drain Plug (BNP),

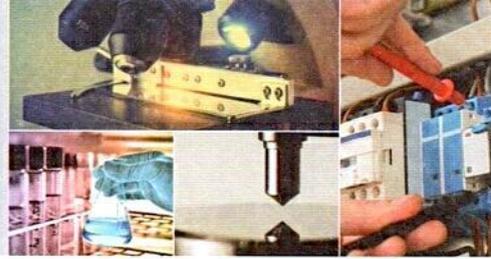
DEGREES OF PROTECTION TEST (IP66)

| | | | | |
|---------------------|-----------------------------|-------------------|-----------------------------|--|
| Discipline | Electrical | Group | ENVIRONMENTAL TEST FACILITY | |
| Test Method: | IEC 60529:2013 | | | |
| Tested At | ELCA Laboratories Mahape | Tested on: | 17-01-2024 | |

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1.0 GENERAL TEST DESCRIPTION

This Report presents the result of the Degrees of Protection Test performed on M20 Breather Drain Plug (BNP) submitted by M/s Akshar Brass Industries Sample is identified as **E-5163-M**

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

APPLIED STANDARD: -

IEC 60529:2013

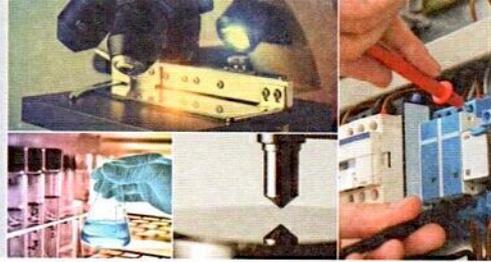
Degrees of Protection provided by enclosures (IP Code)

- 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: 6)
as per Table No. 8 and clause No. 14.2.6

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





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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 12 th January 2024. b) Test for protection against solid foreign object on 12 th January 2024. c) Test for protection against Water on 17 th January 2024. |
| Tested By | Harshali Chaudhari |
| ELCA ID No. | E-5163-M |

3.0 ENVIRONMENT CONDITIONS

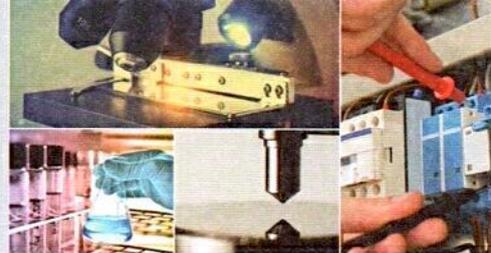
Tests have been performed in a controlled laboratory environment, where the environmental conditions are maintained within the applicable ranges as follows.

| | |
|------------------------------|--|
| 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) | Object Probe -Rigid Steel Rod 1.0 dia | IPD/04 | 02-06-2024 |
| | Digital Push Pull Forge Gauge | IPD/08 | 20-12-2024 |
| | Dust Chamber | ENV/006 | 27-02-2024 |
| | U Tube Vacuum Gauge Manometer | ENV/008 | 30-09-2024 |
| | Air Flow Meter | IPW/014 | 13-12-2024 |
| Ingress Protection Test (IPX6) | Acrylic Flow Meter | IPW/025 | 10-04-2024 |
| | Nozzle for IPX6 | IPW/005/01 | 02-06-2024 |
| | Pressure Gauge | IPW/004/02 | 27-02-2024 |





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5.0 TEST CONDITIONS

Degree of protection against foreign object as per Table 4

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

| | |
|-----------------|---|
| Exposure Period | 8 hours at 20 mbar |
| Start time | 10:10 AM |
| End time | 06: 10 PM |
| Equipment used | ENV/006 |
| IP code | First Characteristic numeral: 6 Category: 1 |

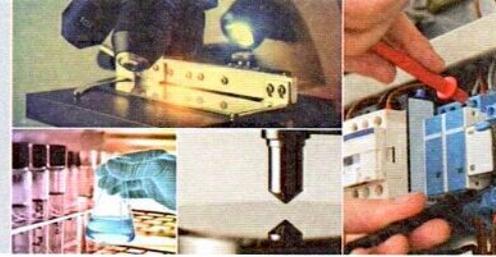
| | |
|---------------------|---|
| Type of dust used | Talcum powder |
| Size of dust | Passed through square meshed sieve of wire diameter 50µm and nominal width of a gap between wires 75 µm |
| Weight of dust used | 3 kg. (2kg.per cubic meter of test chamber) |
| Chamber volume | 1.5 cubic meter |

Degrees of protection against water as per Table 8

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

| | |
|---------------------------|--|
| Equipment used | 12.5 mm. Ø water jet with 100 Lpm flow rate of water |
| Location of the enclosure | 2.5 mtr. from water jet |
| Duration of test | 3 min. |
| IP code | Second Characteristic numeral: 6 |





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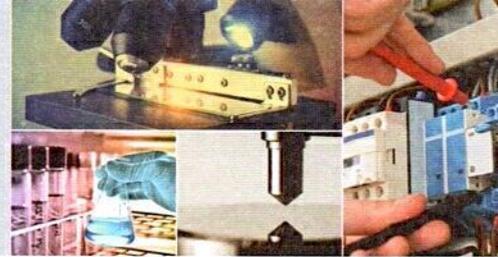
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The sample after protection against solid foreign object (dust test) inside the chamber was seen as follows:



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 inspect.

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 | Water which got entered into enclosure got drained through the (Test sample) M20 Breather Drain Plug (BNP) |
| Parameter | Result |
| Remark | Sample satisfies the requirements for IP66 test as per IEC 60529:2013. |

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



Checked By
Pravin Kamble



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

