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# SHAHIN MAFSAL

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High Voltage Laboratory

## TEST REPORT

APPLICANT NAME: SHAHIN MAFSAL CO.

PRODUCT NAME: 1KV RESINE JOINT (S120-S50)

PRODUCER NAME: SHAHIN MAFSAL CO.

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1KV RESINE JOINT (S120-S50)

BS7888-3 (1998)

## 1. General information

Test operator: Mr. AlirezaSoleymanifar

Test manager: Ms. Samin Sarraf

Test date: Summer 2017

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Laboratory name: HighVoltage Laboratory of ShahinMafsal Co.

Address: Morchekhort Industrial Area, Isfahan Iran

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Applicant name: ShahinMafsal Co.

Request Date: 2017/JUN/8

Request No.: 17-122

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Standard No.: BS788-3

Test Method: Standard

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Test Report No.: TH92108

Sample Inscription Code: STH92108-1 \_ STH92108-2

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Applicant / producer: Shahin Mafsal Co.

Model: S120 (3× 120 + 70)-S50(3 × 50 + 70)

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## 2. Tag & Characteristic



## 3. Mechanical properties of test sample

|  |                     |
|--|---------------------|
| Surface area of sample STH92108-1 (mm <sup>2</sup> ) | $3 \times 120 + 70$ |
| Surface area of sample STH92108-2 (mm <sup>2</sup> ) | $3 \times 50 + 25$  |

## 4. Total Consideration

Customer has right to object the results and test methods, if the objection is proved in a way that the test is influenced, the test must repeat for free. Test samples kept by laboratory only for 6 months, then the laboratory is not responsible for any objection from customer. Samples are selected by customers, so the laboratory is not responsible for sample selection.

## 5. Summary of test methods & results

### a. Power Frequency Stability Voltage (in air)

|                                       |
|---------------------------------------|
| The High Voltage Laboratory Condition |
| Temperature T= 12.1 °C                |
| Air Pressure P=853.1 hPa              |
| Humidity R=36.3 %                     |

The test has done with Power Frequency transformer (CS200-0.25\_HEAFEELY TRENCH Co.)

| Sample code | Applied Voltage to phase | Earth connection to Phases | applied voltage (kV) | Applied voltage duration (s) |
|-------------|--------------------------|----------------------------|----------------------|------------------------------|
| STH 92108-1 | R                        | ST-N                       | 4                    | 60                           |
| STH 92108-1 | S                        | TR-N                       | 4                    | 60                           |
| STH 92108-1 | T                        | RS-N                       | 4                    | 60                           |
| STH 92108-2 | R                        | ST-N                       | 4                    | 60                           |
| STH 92108-2 | S                        | TR-N                       | 4                    | 60                           |
| STH 92108-2 | T                        | RS-N                       | 4                    | 60                           |

|   |
|---|
| Confirmation Criteria                                 |
| The joint must tolerate applied voltage for 1 minute. |

|   |
|---|
| Results                                       |
| Test result is correspondent to the standard. |

**b. Insulation Resistance (in air)**

|                                       |
|---------------------------------------|
| The High Voltage Laboratory Condition |
| Temperature T= 12.1 °C                |
| Air Pressure P=853.1 hPa              |
| Humidity R=36.3 %                     |

The test has done with mega Ohm meter (C.A 6543\_CHAUVIN ARNOUX Co.)

| Sample code | Applied Voltage to phase | Earth connection to Phases | applied voltage (kV) | Applied voltage duration (s) |
|-------------|--------------------------|----------------------------|----------------------|------------------------------|
| STH 92108-1 | R                        | ST-N                       | 1                    | 313                          |
| STH 92108-1 | S                        | TR-N                       | 1                    | 422                          |
| STH 92108-1 | T                        | RS-N                       | 1                    | 460                          |
| STH 92108-2 | R                        | ST-N                       | 1                    | 465                          |
| STH 92108-2 | S                        | TR-N                       | 1                    | 425                          |
| STH 92108-2 | T                        | RS-N                       | 1                    | 362                          |

|   |
|---|
| Confirmation Criteria                               |
| The measured resistance must not be lower than 50MΩ |

|   |
|---|
| Results                                       |
| Test result is correspondent to the standard. |

❖ **The resistance must be measured 1 minute after applying voltage.**

**c. Power Frequency Stability Voltage (in water)**

|                                       |
|---------------------------------------|
| The High Voltage Laboratory Condition |
| Temperature T= 12.1 °C                |
| Air Pressure P=853.1 hPa              |
| Humidity R=36.3 %                     |

The test has done with Power Frequency transformer (CS200-0.25 \_HEAFELY TRENCH Co.) Joint floated in a tank full of water. Joint take place in 1 meter depth of tank and another side of cable locate out of water.

| Sample code | Applied Voltage to phase | Earth connection to Phases | applied voltage (kV) | Applied voltage duration (s) |
|-------------|--------------------------|----------------------------|----------------------|------------------------------|
| STH 92108-1 | R                        | ST-N, water                | 4                    | 60                           |
| STH 92108-1 | S                        | TR-N, water                | 4                    | 60                           |
| STH 92108-1 | T                        | RS-N, water                | 4                    | 60                           |
| STH 92108-2 | R                        | ST-N, water                | 4                    | 60                           |
| STH 92108-2 | S                        | TR-N, water                | 4                    | 60                           |
| STH 92108-2 | T                        | RS-N, water                | 4                    | 60                           |

|   |
|---|
| Confirmation Criteria                                 |
| The joint must tolerate applied voltage for 1 minute. |

|   |
|---|
| Results                                       |
| Test result is correspondent to the standard. |

**d. Insulation Resistance (in water)**

|                                       |
|---------------------------------------|
| The High Voltage Laboratory Condition |
| Temperature T= 12.1 °C                |
| Air Pressure P=853.1 hPa              |
| Humidity R=36.3 %                     |

The test has done with mega Ohm meter (C.A 6543\_CHAUVIN ARNOUX Co. ) Joint floated in a tank full of water. Joint take place in 1 meter depth of tank and another side of cable locate out of water.

| Sample code | Applied Voltage to phase | Earth connection to Phases | applied voltage (kV) | Applied voltage duration (s) |
|-------------|--------------------------|----------------------------|----------------------|------------------------------|
| STH 92108-1 | R                        | ST-N, water                | 1                    | 198                          |
| STH 92108-1 | S                        | TR-N, water                | 1                    | 273                          |
| STH 92108-1 | T                        | RS-N, water                | 1                    | 193                          |
| STH 92108-1 | RST-N                    | Water                      | 1                    | 132                          |
| STH 92108-2 | R                        | ST-N, water                | 1                    | 443                          |
| STH 92108-2 | S                        | TR-N, water                | 1                    | 363                          |
| STH 92108-2 | T                        | RS-N, water                | 1                    | 328                          |
| STH 92108-2 | RST-N                    | water                      | 1                    | 295                          |

|   |
|---|
| Confirmation Criteria                               |
| The measured resistance must not be lower than 50MΩ |

|   |
|---|
| Results                                       |
| Test result is correspondent to the standard. |

❖ **The resistance must be measured 1 minute after applying voltage.**