



NATIONAL PETROCHEMICAL COMPANY STANDARDS

MATERIAL STANDARD FOR ELECTRICAL HEAT TRACING

NPCS-MS--?&-- 03

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CONTENTS

1 SCOPE

2 STANDARDS AND CODES

3 GENERAL REQUIREMENTS

4 AREA CLASSIFICATION AND CERTIFICATION

5 ELECTRICAL SUPPLY SYSTEM

6 HEATING ELEMENTS

7 THERMOSTATS

8 JUNCTION BOXES

9 INSPECTION AND TESTS

10 -VENDOR BID REQUIREMENTS

11 VENDOR DRAWINGS AND DATA

12 PERFORMANCE GUARANTEES

13 PREPARATION FOR SHIPMENT

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1. SCOPE

- 1.1 The intent of this standard is to define the minimum requirements for manufacture, testing and supply of electrical tracing equipment suitable for use in petrochemical plants.
- 1.2 Site conditions and system conditions shall be as what will be specified in the material requisition.
- 1.3 Electrical tracing equipment shall comply with the requirements of the following documents listed in order of precedence:
- a) Purchase order.
 - b) This standard.
 - c) Other specification and standards referred to.
- 1.4 Compliance by the manufacturer with the provisions of this standard does not relieve him of the responsibility of furnishing unit of proper design, mechanically suited to meet operating guarantees at the specified operating conditions.
- 1.5 Such deviations from this standard which the manufacturer may consider advisable, shall be submitted in writing to purchaser, together with his quotation, in order purchaser may approve or reject such deviations.
- 1.6 Exceptions other than those included in the above mentioned document shall not be considered.
- 1.7 Vendor shall only supply equipment of proven design and construction, of which satisfactory operation over at least a three years period can be proven in similar service and operating conditions.
- 1.8 All documentation shall be issued, using SI metric system of measurement., according to NPCS-ES-GN-03.
- 1.9 The English language shall. be used for all correspondence documents, catalogues, drawings and nameplates.
- 1.10 In the reference numbers of this standard, "purchaser" means National Petrochemical Company of Iran, "NPC".

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2 STANDARDS AND CODES

Electrical equipment shall be constructed and tested in accordance with the requirements of the International Electrotechnical Commission, "IEC".

- IEC 800 Specification for Electric Surface Heating.
- IEC 216 Thermal Stability.

3 GENERAL REQUIREMENTS

1.1 A complete electrical heating system shall be provided for maintaining the temperature or to prevent freezing for the services specified in the purchaser requisition.

1.2 All materials shall be of the same quality which have proven successful in their respective uses in similar service and under similar conditions. The workmanship must be of high quality in every detail.

1.3 Consideration shall be given but not limited to environmental conditions, pipe material, pipe size and length, fittings, type and thickness of insulation, lowest ambient design temperature, fluid flow conditions, type of control required such as thermistors, thermostats, etc., and hazardous area classification.

4 AREA CLASSIFICATION AND CERTIFICATION

4.1 The offered equipment shall be suitable for installation in hazardous area if specified in material requisition.

4.2 The selection of electrical equipment for use within hazardous areas shall meet the following requirements and IEC standards.

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