



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

MATERIAL STANDARD
FOR
GAS CHROMATOGRAPHS

NPCS-MS-IN-37

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PREPARED BY : PETROCHEMICAL INDUSTRIES DESIGN & ENGINEERING COMPANY (P.I.D.E.C.)



1 GENERAL

1.1 SCOPE

1.1.1 This standard, covers the minimum requirements for the design, construction, materials, nameplate marking, testing and shipping of gas chromatographs.

1.1.2 The related standards referred to herein and mentioned below shall be of the latest editions prior to the date of the Purchaser's enquiry:

- ANSI B 2.1 Pipe Threads.
- ANSI B 1.6.5 Pipe Flanges and Flanged Fittings.
- API RP-550 PART-II Process Stream Analyzers.
- NEMA-NFPA 70 National Electrical Code.
- NEMA National Electrical Manufacturers Association.
- IEC International Electrotechnical Commission.
- ASTM American Society of Testing and Materials.
- BS British Standards.

1.1.3 In the event of any conflict between this standard and data sheets, related standards, codes, etc., vendor should refer the matter to the purchaser for clarifications and only after obtaining the same should proceed with the manufacture of the items in question.

1.1.4 Vendor's extent of responsibility includes the following:

- a) Proper design of the sampling system and gas chromatograph proper to measure the component of interest with the stated accuracy.
- b) Selection of materials for all the parts of the chromatograph system so as to be compatible with the process stream and the surrounding atmosphere as per purchaser's data sheets.

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- 1.2 BIDS
- 1.2.1 Vendor's quotation shall include a detailed specification sheet for each chromatograph system which shall contain the following information:
- a) All the details regarding type, construction, materials, accessories, etc., of the chromatograph.
 - b) Overall dimensions of major units in millimeters.
 - c) An interconnecting wiring diagram for the complete chromatograph system showing locations, e.g. field, panel, etc.
 - d) Any special cabling requirements including shielding and grounding requirements, maximum permissible distance, etc.
 - e) Details of sampling system.
 - f) Electrical power consumption in Volt-Amperes.
 - g) Flow in m^3/hr .
- 1.2.2 All the units of measurement for various items in vendor's specification sheets shall be the same as those in purchaser's data sheets.
- 1.2.3 All the material specifications for various parts in the vendor's specification sheets shall be to the same standards as those in purchaser's data sheets, e.g. ASTM, BS, etc.
- 1.2.4 Vendor shall attach a list of chromatograph tag numberwise, summing up all the deviations from the purchaser's data sheets, if there are any. Also, vendor should provide reasons for these deviations wherever possible.
- 1.2.5 Vendor shall enclose catalogues giving detailed technical specifications and other information for each chromatograph and its accessories covered in the bid.
- 1.2.6 Vendor's quotation, catalogues, drawings, and maintenance manuals shall be in English. The operating and maintenance manuals shall be prepared in such a way to enable the NPC engineers to do the commissioning and maintenance without outside help.

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