



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

MATERIAL STANDARD

FOR
CONTROL VALVES

NPCS-MS-IN-23

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1 GENERAL

1 . 1 SCOPE

1.1.1 This standard covers the minimum requirements for the design, materials, nameplate marking, testing and shipping of control valves.

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 16.5 Pipe Flanges and Flanged Fittings.
- ANSI B 16.10 Face to Face and End to End Dimensions of Valves.
- ISA S 75.01 Control Valve Sizing Equations.
- ISA S 15.02 Control Valve Capacity Test Procedure.
- ISA S 75.03 Uniform Face to Face Dimensions for Flanged Globe Style Control Valve Bodies.
- ISA S 75.04 Face to Face Dimensions of Flangeless Control Valves.
- OSHA Occupational Safety & Health Association.

1.1.3 In the event of any conflict between this standard and data sheets, related standards, codes, etc., the 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 Purchaser's data sheets indicate valve capacity (in terms of C_v), materials for body, trim, packing, etc. However, this does not absolve the Vendor of the responsibility for proper selection with respect to the following:

- a) Valve with suitable capacity (in terms of C_v) and rangeability for the flow conditions indicated.
- b) Actuator to meet the shut off differential pressures indicated.



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- c) Materials for body trim, packing box and other parts of the valve for the fluid and its operating conditions indicated.
- d) Materials used for various parts of all accessories of the control valve like air filter regulators, solenoid valves, limit switches, positioners, pilot relays, volume boosters, locking relays, interconnecting tubing and fittings, etc.
- e) Checking and **proper treatment for cavitation**, flashing and noise and ensuring -that the fluid velocity is within the permissible limits.

1.2 BIDS

- 1.2.1 Vendor's quotation shall include a detailed specification sheet for each control valve which shall provide all the details regarding type, construction materials, capacity, etc. and any other valve accessories.
- 1.2.2 All the units of measurement for various items in the Vendor's specification sheets shall be to the same Standards as those in purchaser's data sheets.
- 1.2.3 All the material specifications for the various parts in the vendor's specification sheets shall be to the same **Standards** as **those** in purchaser's data sheets.
- 1.2.4 Vendor shall attach a list of control valves tag numberwise, summing up all the deviations, if any, from the purchaser's **data** sheets. 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 type of control valve and its accessories covered in the bid.
- 1.2.6 Vendor's quotation, catalogues, drawings, operating and maintenance manuals, etc., shall be in English.
- 1.2.7 Vendor shall also quote for the following:
 - a) Two years' operational spares for each control valve and its accessories.
 - b) Any special tools needed for maintenance work.
 - c) One extra set of packing for each valve.