



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

MATERIAL STANDARD

FOR
STORAGE TANKS

NPCS-MS-PV-04

REVISION : 0

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1

SCOPE

This standard as minimum directives, applies to above-ground vertical, cylindrical, closed and open-top (with or without floating roof), welded, Steel storage tanks, with pressures from 6 mbar vacuum to 170 mbar above atmospheric pressure for oil industries.

2

STANDARDS AND CODES

The latest edition of the following codes and standards are undetachable parts of this standard and shall be used with this standard, as minimum.

- API 650 Welded Steel Tanks for Oil Storage.
- API 2000 Venting Atmospheric and Low Pressure Storage Tanks.
- API 2001 Fire Protection in Refineries.
- API 2003 Recommended Practice for Protection Against Ignition Out of Static, Lightning & Stray Currents.
- API 2016 Cleaning Petroleum Storage Tanks.
- API 2550 Method for Measurement & Calibration of Upright Cylindrical Tanks.
- NFPA Vol's 1 and 8 Fire Protection Codes.
- AWA D 100 Welded Steel Tanks for Water Storage.
- NPCS-ES-PV-03 Engineering Standard for Storage Tanks.
- NPCS-CS-PV-02 Construction Standard for Erection of Storage Tanks.

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3 DESIGN

3.1 Tanks shall meet the requirements of the applicable codes as minimum. The tanks shall have an API monogrammed nameplate.

3.2 Storage tank specification data sheets shall be filled out by the manufacturer. The inspector shall fill out the appropriate blanks in this specification data sheet.

3.3 Before commencing any procurement or construction activity, the design requirements shall be ascertained to be satisfied according to the NPCS-ES-PV-03 . Any material requirement set forth in this standard shall be taken into account for procurement purposes.

4 FABRICATION, ERECTION AND CONSTRUCTION

Fabrication, erection and construction will be carried out according to the applicable codes and NPCS-CS-PV-02. Any material requirement set forth in the mentioned standard shall be taken into account for procurement purposes.

5 TESTING

Testing will be carried out according to the applicable codes and NPCS-CS-PV-02. Any material requirement set forth in the mentioned standard shall be taken into account for procurement purposes.



6

PAINTING

Painting will be carried out according to the applicable codes and NPCS-CS-PV-02. Any material requirement set forth in the mentioned standard shall be taken into account for procurement purposes.

7

APPURTENANCES AND ACCESSORIES

7.1

GENERAL

7.1.1

Shell Manways; The minimum number and size shall be:

- Tanks over 60 m diameter : 4 No. 24" ID
equally spaced.
- Tanks 45 m - 60 m diameter : 3 No. 24" ID
equally spaced.
- Tanks 12 m - 45 m diameter : 2 No. 24" ID
equally spaced.
- Tanks under 12 m diameter : 1 No. 24" ID
equally spaced.

7.1.2

Minimum size for filling and suction nozzle shall be:

- Tanks over 60 m diameter : 8"
- Tanks 30 m - 60 m diameter : 6"
- Tanks 15 m - 30 m diameter : 4"
- Tanks under 15 m diameter : 3"

7.1.3

The minimum distance from bottom of tanks to centerline of any nozzle or anyway shall be as per API 650. Regular type nozzles H shall be used.

7.1.4

Electric bonds from all attachments of the roof and internals to the shell shall be provided.

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