



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

CONSTRUCTION STANDARD
FOR
FIRE FIGHTING SYSTEM

NPCS-CS-GC-10

REVISION : 0

JANUARY 1993

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CONTENTS

- 1 SCOPE
- 2 STANDARDS AND CODES
- 3 FIRE PROTECTION FACILITIES
- 4 CONSTRUCTION AND ERECTION
- 5 HALON PROTECTION SYSTEM
- 6 BCF (HALON-1211) SYSTEM FOR FLOATING ROOF TANKS
- 7 CO2 SYSTEM
- 8 FIRST AID FIRE FIGHTING EQUIPMENT
- 9 PAINTING
- 10 TESTING

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



1 SCOPE

This standard describes the construction requirements of the fire fighting system in an industrial complex.

2 STANDARDS AND CODES

- NFPA National Fire Protection Association.
- NPCS National Petrochemical Standards.
 - NPCS-CS-GC-08 Fabrication & Erection of Water Pipeline.
 - NPCS-CS-GC-09 Coating & Wrapping of Underground Piping.
 - NPCS-ES-GC-09 Underground Piping System.
 - NPCS-ES-GC-10 Fire Fighting System.
 - NPCS-ES-PI-02 Piping Material Specification.
 - NPCS-CS-PI-01 Welding & Heat Treatment.
 - NPCS-CS-PI-02 Piping Fabrication & Erection.
 - NPCS-CS-PI-04 Testing, Flushing & Reinstatement of Piping.

3 FIRE PROTECTION FACILITIES

Following facilities shall be installed/erected for fire protection system:

- storage.
- Aboveground piping.
- Underground piping.

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- Pump house.
- Pump station piping for installation of pumps & drivers.
- Fire water distribution network. (underground)
- Installation of hydrants & monitors.
- Installation of hose stations, hose reels.
- Installation of foam system.
- Installation of water spray system over tanks, sprayers, pressure vessels, under air fin coolers, over pumps handling hydrocarbon at higher temperature, etc.
- Installation of water spray system over loading and unloading gantries of hydrocarbons.
- Halon protection system.
- BCF system over floating roof tanks.
- Installation of CO2 system.
- Installation of the first aid fire fighting equipment,.

4

CONSTRUCTION AND ERECTION

4.1

STORAGES

4.1.1

The storage shall be constructed based on project construction drawings. Storages shall be provided with suction pipes, overflow pipes, inlet pipes, drain pipes, manholes (if covered) and pipe inserts for instruments complete in all respects. Type of construction, size, levels, etc., and other relevant datas will be mentioned in project construction drawings.

4.1.2

Storage shall be tested after filling with water for a period of 24 hr.

4.1.3

Material of construction may be RCC or Carbon Steel as what will be indicated on project construction drawings.

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