



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

ENGINEERING STANDARD
FOR
CAPACITIES OF STORM WATER DITCHES

NPCS-ES-GC-07

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1

SCOPE

This standard describes the minimum engineering requirements for capacities of storm water ditches in an industrial complex.

2

STANDARDS AND CODES

- NPCS-ES-GC-08 Engineering Standard for Storm Water Drainage System.
- NPCS-ES-GC-16 Engineering Standard for Site Data.

3

TYPES AND SIZES OF DITCHES

Mainly three types of ditches shall be used in the plant.

- Type I Rectangular , 300 mm wide.
- Type II Rectangular , 500 mm wide.
- Type III Trapezoidal , Economical section.

3.1

FLOW (DISCHARGE)

The flow of ditches have been calculated in the tables as per Mannings formula which is given below.

$$V = \frac{1}{n} R^{2/3} S^{1/2}$$

$$Q = AV$$

Where :

V = Velocity in m/s

n = Manning's rugosity coefficient

R = Hydraulic mean radius = A/P

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