Flow Optimizers

Specification

Inlet Flow Conditioning Spool

1. Pump manufacturer to provide a flow conditioner for each pump consisting of a flanged spool piece with internal flow conditioning grid as indicated and specified for all double suction split case pumps with suctions 8 inch [200 mm] and larger.
    a. Provide a certified drawing including dimensions, weight, welding requirements, material designations, material thicknesses and flange details for review with pump submittal.

2. Provide flow conditioning grid design approved by a Nationally recognized Hydraulics Testing Laboratory.
    a. For sizes larger than 18 inch (450 mm) provide a design based on physical hydraulic modeling by a Nationally Recognized Hydraulics Laboratory

3. Design Criteria:
    a. Spool, Minimum Length: 1 x Pipe diameter
        i. Ends: Flanged: ANSI 150-lb
        ii. Type: Van Stone flat face rings and back-up flanges
    b. Grid, Minimum Length: 1 x Pipe diameter
        i. Thickness: 0.125 inch (3 mm)
        ii. Grid Spacing: 4 inch (100 mm) nominal
        iii. Velocity: Maximum 7 ft/s (2.13 m/s).
4. Materials:
    a. Spool: Type 316L A778 welded stainless steel pipe, Schedule 10S
    b. Van Stone flat face rings and back up flanges: Type 316Lstainless steel
    c. Hardware: Type 316 stainless steel

5. Finish:
    a. Pickled and passivated,
    b. Completely immerse for a minimum of 15 minutes in 10% nitric acid and 3% hydrofluoric acid at 125 degrees Fahrenheit, followed by a neutralizing rinse.

6. Manufacturers:
    a. Flow Optimizers, LLC.
    b. Or Engineer Approved Equal

.