

AUTOMATIC STRAINER APPLICATION WORKSHEET

Self-Cleaning Strainers

GENERAL

SERVICE APPLICATION: _____

MARKET CODE: (CHECK ONE)

INDUSTRIAL MUNICIPAL POWER PETROLEUM

LIQUID TO BE STRAINED: _____

SPECIFIC GRAVITY ____, VISCOSITY (CPS/SSU) ____, TEMP. (°F) ____

FLOW CONDITIONS

FLOW (GPM): ____, MAXIMUM ____, MINIMUM ____, VEL (FT./SEC) ____

OPERATING PRESSURE (PSI): ____, NORMAL ____, DESIGN ____, MINIMUM ____

OPERATING TEMPERATURE (°F): ____, NORMAL ____, DESIGN ____, MINIMUM ____

MAX. ALLOWABLE PRESS. DROP (PSI) CLEAN ____, DIRTY ____

CONTAMINANT

SOLIDS TO BE REMOVED: ____, HARD SOFT STICKY FIBROUS

SOLIDS CONCENTRATION: ____PPM, ____%WT, ____% VOLUME

PARTICLE SIZE: ____ MICRONS OR ____ INCHES

ELEMENT: PERFORATED MESH DURAWEDGE® ELEMENT

STRAINER CONSTRUCTION

MODEL 2596: CAST DUCTILE FAB STEEL FAB STAINLESS

MODEL 596: CAST IRON CAST STEEL CAST STAINLESS

CAST BRONZE FAB STEEL FAB STAINLESS

PIPELINE SIZE (INCHES): _____

END CONNECTIONS: FLANGED 125# 150# OTHER _____

MOTOR

FRAME: TEFC TENV OTHER _____

POWER SUPPLY: 120V, 1 PH, 60 Hz 230/460 V, 3 PH, 60 Hz, OTHER _____

SPECIAL COMMENTS: _____

CONTROL PACKAGE

TYPE: ACS-1 ACS-2 ACS-3

SPECIAL REQUIREMENTS OR OPTIONS: _____

SUBMITTALS (CHECK IF REQUIRED)

APPROVAL PRINTS CERTIFIED PRINTS CHEMICAL/PHYSICAL CERTIFICATIONS

HYDRO TEST REPORTS OTHER _____

OTHER SPECIFICATIONS/REQUIREMENTS: _____

AUTOMATIC STRAINER SAMPLE SPEC

Design

1. The Automatic Self-Cleaning Strainer shall be a Eaton Strain-O-Matic® Model 596 or 2596.

2. Strainer Design Parameters:

Strainer Inlet Size _____ in.

Flow Rate _____ GPM

Working Pressure _____ PSI (Min. 20 PSI)

Design Pressure _____ PSI

Design Temperature _____ °F

Max. Allowable Pressure Drop _____ PSID

Solids Loading _____ PPM

Design shall be in general accordance with ANSI and ASME Sec. VIII Division 1.

3. For ease of maintenance the strainer shall be designed so the entire operating assembly, motor, gear reducer, cover, backwash arm assembly, bearing housing and element lift from the strainer body as a complete unit.

4. For backwashing efficiency the entire open area of the backwash port opening shall be in close proximity to the full length of the screen section being backwashed. Additionally, the entire backwash arm shall have a full-flow opening throughout the entire passage to the backwash piping. The backwash arm shall not contact or scrape the screen at any point.

Screen Element

1. Media Design parameters (check one):

Type:

DuraWedge media (vee-shaped profile wire)

Convoluted

Convoluted Sinterbonded

Opening Size:

Inches _____, Mesh Equivalent _____, Microns _____

2. The element shall be a one-piece cartridge design for ease of removal and cleaning.

3. The element shall have stainless steel "cap rings" at both ends to prevent bypass of dirty fluid. Reinforcing circumferential bands shall also be provided for structural strength.

Materials of Construction

The strainer body shall be (iron, carbon steel, stainless steel, bronze) and shall be appropriate for the service conditions.

All components shall be of ASTM designed materials suitable for the service conditions and consistent with good engineering practice.

Control System

The system shall be capable of automatically controlling and monitoring the strainer's operation.

The system shall have the following components.

The motor shall be a low HP TEFC single-phase 110/220V or three-phase 230/460V with a gear reducer to drive the backwash shaft.

A NEMA 4 control panel shall be furnished with three indicator lights (Power On, Backwash valve Open and High differential Pressure); a 3-position selector switch (Off-On-Auto) to control the backwashing cycle; and contacts for external alarm. (Motor starter and/or transformer are optional as specified).

A diaphragm-type differential pressure switch is to be provided that shall be capable of initiating backwashing at a set differential pressure.

An electrically actuated ball valve shall be provided to control the backwash flow.

Low Differential Pressure Model

For line pressures below 20 PSI or for suction service, specify Strain-O-Matic Strainer Model 596LDP (Low Differential Pressure) design.