GENERAL SPECIFICATIONS

Model 108SA-3 Surge Anticipation Valve – Hydraulic Type

1.1 General

The surge anticipation valve shall be installed on a bypass line downstream of the pump check valve(s). It shall function to prevent potentially damaging pressure surges by (a) opening rapidly in the event of a drop in pressure below a predetermined set point and (b) opening rapidly if main line pressure should exceed a predetermined set point. In either event, the valve shall slowly close after pressure has returned to normal. The surge anticipation valve shall be a <size> Model 108SA-3, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

1.2 Design

The surge anticipation valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall the pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a closing speed control, Y-strainer and isolation ball valves. The surge anticipation valve shall be operationally and hydrostatically tested prior to shipment.

1.3 Materials of Construction

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. End connections shall be <ANSI B16.42 Class 150# flange > <ANSI B16.42 Class 300# flange, > <ANSI B1.20.1 threaded > <grooved ends >. All ferrous surfaces shall be coated with a minimum of 4 mils of an NSF-61 approved epoxy. The main valve seat ring shall be bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The control pilots shall be bronze. The closing speed control and isolation ball valves shall be brass, and control line tubing shall be copper.

1.4 Operating Conditions

The surge anticipation valve shall be capable of limiting main line pressure to a maximum of **<X>** psi, based on a main line maximum flow rate of **<X>** gpm and a static pressure of **<X>** psi, with valve discharge to atmosphere.