



Application No. 6

START-UP STEAM VENT VALVE

As a cold boiler is fired up, steam is produced but cannot initially be sent to the turbine or plant until the pressure and temperature has stabilised. During this time it is necessary to exhaust the steam through the vent valve. This valve can see high-pressure drop and large flow and so is potentially noisy. The pressure must be dropped gradually across many restrictions in series with increasing volume available at each successive stage so that the velocity is controlled at low values even though the pressure is dropping. This is achieved in the Mitech valve using disk stack trim and downstream diffuser plates that create a back pressure on the valve at high flow rates.



Customer – IGSAS – Turkey
Date supplied – 20/02/2000

Customer Application Data

The customer wanted the valve to operate under the following conditions:

- ◆ Max flow rate = 18 kg/s
- ◆ Inlet pressure = 125 bar (a)
- ◆ Outlet pressure = Atmosphere
- ◆ Temperature = 500°C
- ◆ Medium = Steam

Description of Valve Supplied

Mitech supplied a 250mm, 2500# Chrome Moly angle valve complete with Energy Dissipating Disk Stack and two stage diffuser plate.

Trim

Type	=	ED Disk Stack
Seat Material	=	Stellite
Plug Material	=	316 StSt / Stellite
Seat Diameter	=	80mm
CV Selected	=	75
Flow Direction	=	Under
Leakage Rate	=	ANSI V
Characteristic	=	Bi Linear

Body

Size	=	10" – 250mm
Style	=	Angle Globe Valve
Material	=	Chrome Moly WC6
Flange Type	=	Butt Weld
Flange Rating	=	ANSI 2500# / 600#



Application No. 6

Bonnet

Material = Chrome Moly WC6
Guide-Upper = StSt / Grafoil
Guide-Lower = Stellite
Packing = Graphite Braid
Gaskets = StSt Grafoil
Live Loading = Yes

Actuator

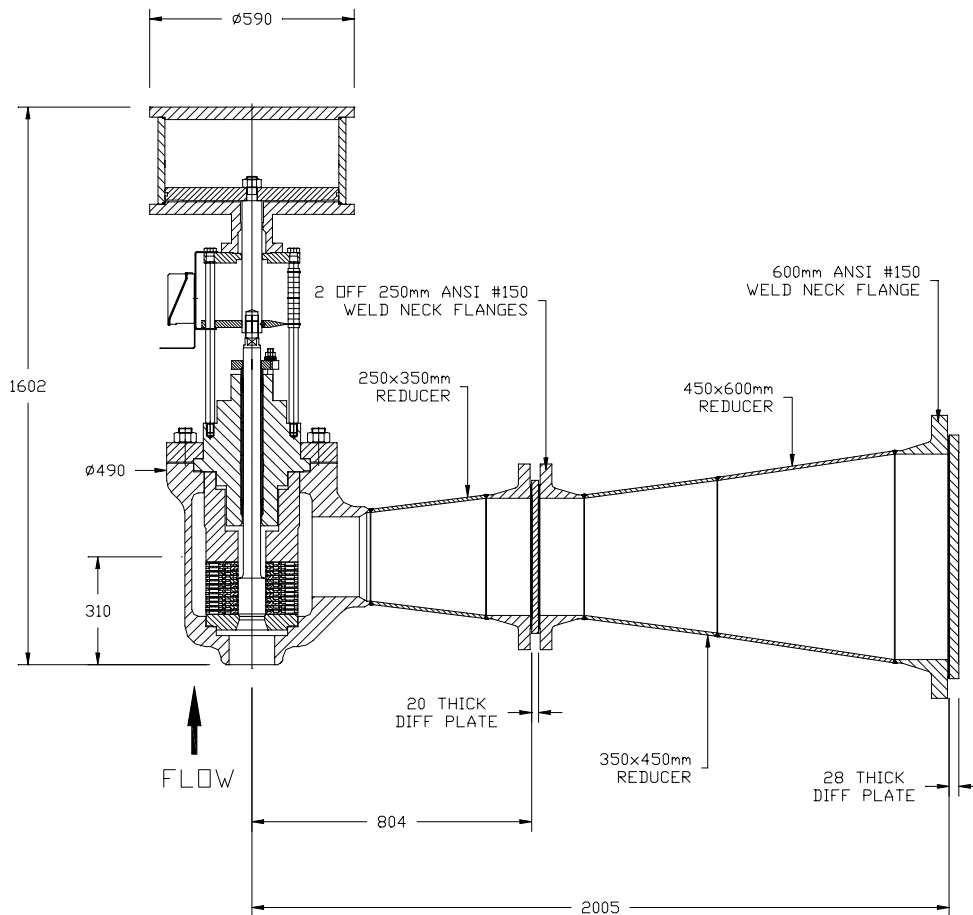
Type = Pneumatic Piston
Fail Position = Open

Positioner

Type = Pneumatic

Accessories

2 stage diffuser plates – 350mm / 600mm



Other references:

Samancor – South Africa, Sapref – South Africa, Norske Skog – New Zealand