PLAINTIFF'S EXHIBIT
CHV-25

SPECIFICATION NO. EG-2350
CONTROL VALVE CONSTRUCTION

1.0 CONTROL VALVE BODIES

1.1 Size - Body size shall be 3/4-inch minimum. Odd body sizes such as 1-1/4, 2-1/2, and 5 inches shall not be used.

1.2 Process Connections

(a) Cast iron valves 1-1/2-inch and smaller shall have screwed bodies; 2 inches through 8 inches shall be flanged with ASA 250-lb minimum rating.

(b) Steel valves 1-1/2-inch and smaller shall have screwed bodies except that where seal welding is required bodies shall be flanged with ASA 300-lb minimum rating. Steel valve 2 inches through 8 inches shall be flanged with ASA 300-lb minimum rating.

(c) Face-to-face dimension for flanged valves shall be per ASA B16.10-1957 (same as ISA RP 4.1).

1.3 Lube and Iso Valves - Lubricator and isolating valves are required on all valves except on special valve designs which cannot accommodate lubricators.

1.4 Stuffing Box - Bolted flange type.

~~1.5 Radiating Fin Bonnet - Shall be used on valves operating at fluid~~ temperature 450F and above.

1.6 Extension Column Bonnet - Shall be used on valves operating at fluid temperatures 32F and below.

1.7 Bonnet Closure - Bolted flange type with confined gasket. Gasket material shall conform to Project Piping Specification.

1.8 Bottom Head Closure - Bolted flange type with confined gasket. Gasket material shall conform to Project Piping Specification. Single seated valves in 3/4-inch bodies need not have this type bottom closure.

1.9 Drain Connections - Bottom head drain connections are not required.

2.0 INNER VALVES

2.1 Reversible - Inner valves shall be readily reversible in the field in 1-inch and larger sizes.

2.2 Plug Guides - Top and Bottom guided except in single seated valves in 3/4-inch bodies.

2.3 Plug Types - Solid "turned" type only. ~~"Vee-Port" type shall not be used unless specifically approved by COMPANY.~~

CONTROL VALVE PACKING AND LUBRICANT LIST

Service	Packing	Lubricant
Air	Garlock 256 or John Crane 6-AM	Dow-Corning 234
Ammonia	Garlock 145, Raybestos Manhattan 1225, or John Crane 6-AM	Nordstrom 421 or 147
Asphalt & Tars	Garlock 256 or 145	Nordstrom 555
Aromatic solvents (as benzene, toluene, etc.) to 600F	Garlock 256 or 145	Nordstrom 755
Chlorine Liquid and Chlorine Gas	John Crane C-98	Nordstrom 188
Hydrocarbon Liquids to 600F. LPG, fuel & lube oil, crude distillates	Garlock 256 or 145 or John Crane 6-AM	Nordstrom 555
Gasoline, kerosene, mineral oil, naphthas	Garlock 256 or 145 or John Crane 6-AM	Nordstrom 357
Hydrocarbon gas	Garlock 256	Nordstrom 555 or 386
Hydrochloric Acid and Hydrochloric Acid-Hydrocarbon Mixtures	John Crane C-98	Nordstrom 921
Hydrofluoric Acid 80 to 100%	John Crane 704	Nordstrom 799
Nitric Acid (0 to 80%) to 140F	John Crane 704	Nordstrom 921
Phenol	John Crane 704	Nordstrom 921
Phosphoric Acid (70-100%) to 250F	John Crane 704	Nordstrom 921
Salt Water	Garlock 256 or John Crane 6-AM	Dow-Corning 234
Sodium Hydroxide to 425F	John Crane 704 or C-98, or Flexrock 401	Nordstrom 421, 147 or 921
Steam to 125 psig	Garlock 145 or John Crane 6-AM	Dow-Corning 234
Steam over 125 psig	Alternate rings Garlock 256 and John Crane 6-AM, bottom and top rings to be John Crane 6-AM	Nordstrom 921
Sulfuric Acid (75% to fuming) 40 to 100F	John Crane 704 or Flexrock 401	Nordstrom 921
Water - Fresh, Cooling tower	Garlock 256	Dow-Corning 234

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