FUGITIVE EMISSION VALVE

Most of the focus regarding fugitive emission in valves relates to valve stem packing. Standards such as API-622 Type Testing of Process Valve Packing for fugitive Emission have been established to test valve packing.Less attention is paid to the bolted joints in a valve.

Valves can have many as five bolted joints-two-end flanges, two body-to-end adapter flanges(for three piece construction) and bonnet flange. These are potentially a significant source of fugitive emissions. One end user has reported 28% of it's emission come from flanged joints.



Product Range - Cast Steel Valves

Valve Type	Class Rating	Size Range
Gate Valve (Bolted Bonnet)	150#	2" to 72"
	300#	2" to 48"
	600#	2" to 36"
Gate Valve (Pressure Seal)	900#	2" to 24"
	1500#	2" to 24"
	2500#	2" to 12"
Globe Valve (Bolted Bonnet)	150#	2" to 24"
	300#	2" to 16"
	600#	2" to 16"
Globe Valve (Pressure Seal)	900#	2" to 12"
	1500#	2" to 12"
Swing Check Valve (Bolted Bonnet)	150#	2" to 36"
	300#	2" to 36"
	600#	2" to 24"
Swing Chek Valve (Presurre Seal)	900#	2" to 12"
	1500#	2" to 12"
Floating Ball Valve	150#	1/2" to 6"
	300#	1/2" to 6"
Trunnion Mounted Ball Valve	150#	2" to 36"
	300#	2" to 36"
	600#	2" to 36"

Product Range - Forged Steel Valves

Valve Type	Class Rating	Size Range
Gate Valve (Bolted Bonnet)	800#	1/2" to 2"
	900#	1/2" to 2"
	1500#	1/2" to 2"
Gate Valve (Welded Bonnet)	900#	1/2" to 2"
	1500#	1/2" to 2"
Globe Valve (Welded Type)	900#	1/2" to 2"
	1500#	1/2" to 2"
Check Valve (Bolted Type)	800#	1/2" to 2"
	900#	1/2" to 2"
	1500#	1/2" to 2"
Check Valve (Welded Type)	900#	1/2" to 2"
	1500#	1/2" to 2"

Standards

DESIGN STANDARD

ASME Sec III NB,NC,ND/ASME QME-1/
ASME B16.34/API 600/BS1414

TESTING STANDARD

API 598/BS EN 12266-1

FACE TO FACE

ASME B 16.10

END CONNECTION

Flanged End - ASME B 16.5
Butt Weld End – ASME B 16.25

PRESSURE – TEMPERATURE CHART

ASME B 16.34

Valve Operation

HANDWHEEL

2" – 10" - Class 150, 300, 600
2" – 4" - Class 900 & 1500

GEAR OPERATOR

12" & Above - Class 150, 300, 600
6" & Above - Class 900 ,1500

Material

Structure	End Connection	Flanged End Raised Face, Butt Weld End, RTJ, ETC
	Operation	Hand wheel, Gear Operator, Electrical Actuator, Pneumatic, Hydraulic
Material	Shell	WCB, WC1, WC6, WC9, LCB, LCC, LC3, C5, C12, CF8, CF8M, CF3, CF3M, CF8C, CN7M, CD4MCu, Hastelloy, Inconel, Duplex Stainless Steel
	Trim	13% Cr Steel, 304 , 304 L, 316, 316L, 321, 347, F 51, Monel