

Fugitive Emissions Certificate: 8110859171-500-22

This is to certify that the NPS 2 (DN 50) Class 1500 Cryogenic Gate Valve

Manufactured and Tested by

M/s. L&T Valves Limited

(Post Bag No. 976, Mount Poonamallee Road, Manapakkam, Chennai - 600089, India)

as per Fugitive Emission standard ISO 15848 - Part 1, First Edition 2006, is ranked as

ISO FE BH - CO2 - SSA 0 - t (-196°C) - CL1500 - ISO 15848-1

Valve details	NPS 2 (DN 50), Class 1500, Cryogenic Gate Valve (Stem diameter: 25.4 mm)	
Stem Seal	6 Braided Graphite split rings (Teadit Style 2236)	
Body Seal	Ring type joint (SS 316)	
Test Conditions	Fluid	Helium
	Pressure	248.2 bar / 248.2 bar
	Temperature	RT/ -196°C
	Test method	Vacuum Method (Annex A of ISO 15848 Part-1) Sniffing Method (Annex B of ISO 15848 Part-1)
Test Results	Tightness class	ВН
	Endurance class	CO2
	No. of mechanical cycles	1500
	No. of thermal cycles	3
	Number of stem seal adjustments (SSA)	0
Qualification extension	Stem diameters qualified (50% lower and 200% higher)	Cryogenic Gate Valves with Stem diameters ranging from 12.7 mm to 50.4 mm
	Size/Class qualified	Classes 150, 300, 600, 900 & 1500 (Sizes covering Stem diameters 12.7 mm to 50.4 mm

This Certificate shall be valid in conjunction with test report No LTVFEISOGGC-029 dated 08/08/2014.

28th May 2018

I.S.Madhavan
For self & on behalf of Mr. P. Raghuraman
(Surveyor to TUV India)

Note: This certificate is revalidated on 28.05.2018 based on the earlier certificate no 8110859171-500-22 dated 8^{th} Aug 2014