

## Manufacturing:

Custom-built Vacuum Components & Assemblies  
Ceramic-to-metal & Glass-to-metal Joints

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## Services:

Testing : Vacuum, Helium Leak

Labour Works : Vacuum Brazing, Vacuum Heat Treatment

Calibration : Vacuum Gauges, Helium Standard Leaks

Training : Vacuum Testing, Helium Leak Testing

## TEST REPORT - HELIUM LEAK TESTING

Report No :	<b>PVT/TD/TR 040</b>	Report Date :	<b>November 1, 2012</b>
Client :	<b>TOYO ENGINEERING INDIA LTD</b>	Testing Equipment :	<b>HLD ASM 310 ADIXEN</b>
Manufacturer :	<b>Engineers Combine, Ahmedabad</b>	Calibrated Leak :	<b>PES/SLV/01, SLV/01/001</b>
Item :	<b>Valves</b>	Code / Standard :	<b>ASME Sec V, Art 10</b>
P O Reference :	<b>PRC/6277Y/P/MISC-083</b>	Qualification :	<b>He Leak Rate &lt;math&gt;10^{-6}&lt;/math&gt; mbar l/s</b>

<b>Leak Detector Instrument Calibration</b>			
1	Standard Leak Value <b><math>2.6 \times 10^{-6}</math> mbar l/s</b>	Observed Leak Value <b><math>- 2.6 \times 10^{-6}</math> mbar l/s</b>	Instrument Sensitivity <b>better than <math>10^{-9}</math> mbar l/s</b>
<b>System Calibration / Probe Calibration</b>			
2	Standard Leak Value <b><math>3.0 \times 10^{-6}</math> mbar l/s</b>	Observed Leak Value <b><math>- 2.0 \times 10^{-6}</math> mbar l/s</b>	Correction Factor <b>- 1.5</b>
3	Evacuation		Pressurisation
	Hood $\checkmark$	Spray	Bombing
3	Pressure <b>0.001 mbar</b>		Bombing Pressure
			Hood Vacuum
<b>Test Particulars</b>		<b>Valve Reference</b>	<b>Leak Rate (mbar l/s)</b>
4	The valve was pressurised to 10 bar with Helium.		1.5", 1500 #, GTV, Body Heat 4233A, Bonnet Heat 4292A, Sr No 121
	A sniffer probe was connected to And taken around the valve for measuring leak rate at body, Bonnet joint and Gland		1.5", 1500 #, GTV, Body Heat 4233A, Bonnet Heat 4292A, Sr No 122
			1.5", 1500 #, GTV, Body Heat 4233A, Bonnet Heat 4292A, Sr No 123
			0.75", 1500 #, GBV, Body Heat 4771A, Bonnet Heat 4794, Sr No 124
			0.75", 1500 #, GTV, Body Heat 4771A, Bonnet Heat 4794, Sr No 125

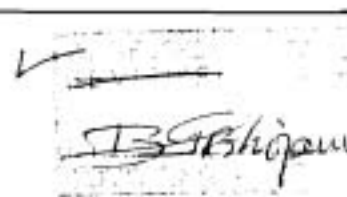
Final Remarks: **The Helium leak rate observed was within acceptable limit in all the valves**



Testing Agency



Manufacturer



Inspection Authority

Client