

# LEAK TEST SERVICES

HELIUM LEAK TEST Chambers, Heat Exchangers, Components, Valves, Roll Metallizers etc.

Ref : HLT/REYNOLD-VALVE/201

Date : 29 March 2014

## HELIUM LEAK TEST REPORT

- |                                 |   |
|---------------------------------|---|
| 1) Manufacturer                 | : Reynold Valves Ltd  |
| 2) Client                       | : M/S Essar Projects ( India ) Limited  |
| 3) Purchase Order No            | : CS01/M05/2700004830 dated 14 -08-2012   |
| 4) Item Description             | : ASTM A216 Gr. WCB Ball Valve Flanged End to ASA 300#                                  |
| 5) Serial Number                | : S 2292  |
| 6) Instrument/Machine           | : Helium Leak Detector, Pfeiffer, Germany, Model 560                                    |
| 7) Calibrated Standard Leak     | : $5.24 \times 10^{-8}$ mbar lit / sec, Serial No.117/08                                |
| 8) Approved Procedure           | : HLT/REYNOLD-V/495 dated 6 Nov 2013  |
| 9) Test Medium                  | : Helium  |
| 10) Test Pressure               | : $7 \text{ kg/cm}^2$ ( Helium $3.5 \text{ kg/cm}^2$ , Nitrogen $3.5 \text{ kg/cm}^2$ ) |
| 11) Test Method                 | : Sniffer Probe   |
| 12) Test pressure Hold Duration | : 6 minutes   |
| 13) Acceptable leak Rate        | : $1 \times 10^{-4}$ mbar lit / sec   |


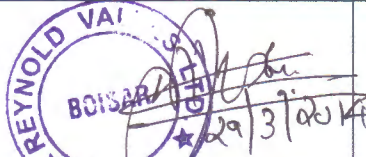
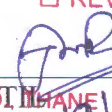
Note :-

- Valve filled with Helium (  $3.5 \text{ kg/cm}^2$  ) and Nitrogen Gas (  $3.5 \text{ kg/cm}^2$  ) Total Pressure :  $7 \text{ kg/cm}^2$
- Body Seal and Gland Seal of valve covered with Plastic Bag & Adhesive tape. ( Hood )
- Sniffer probe inserted in Plastic Bag covering Body Joint, Gland Seal of the Valve

Observations and Result :-

	Background Reading mbar lit / sec	Maximum Observed Reading mbar lit / sec	Leak Rate mbar lit / sec
Body Seal	$2.45 \times 10^{-6}$	$2.57 \times 10^{-6}$	$0.12 \times 10^{-6}$
Gland Seal	$2.45 \times 10^{-6}$	$2.49 \times 10^{-6}$	$0.04 \times 10^{-6}$

### RESULT : HELIUM LEAK TEST SATISFACTORY

Test performed by Leak Test Services	Witnessed by Reynold Valves Ltd	Reviewed by SGS ( India ) Pvt Ltd
 ANIL JOSHI	 MILAP DESAI	 JITENDRA PATIL

<b>SGS</b>	<input checked="" type="checkbox"/> WITNESSED <input type="checkbox"/> REVIEWED
Jitendra Patil Date & Signature: 29/3/2014	
The SGS stamp and signature is for witnessing/observation Purposes only and is subject to the provisions of the SGS General Conditions of Services, particularly article 2(d), available at <a href="http://sgs.com/terms_and_conditions.htm">http://sgs.com/terms_and_conditions.htm</a> .	