



Interim
 Final

INSPECTION REPORT Nr. ITF/DPT/MUMB/12.10.ER/IR/001

BV Job nr: IND.M.4.10.0878 - BVI

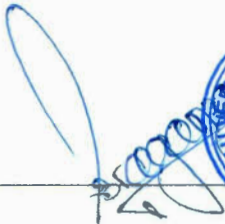

(ORIGINAL)

PROJECT: Design Proof Test of Eccentric Reducer	Ref: -
BV Client: M/s. Inter-Tech Fittings (I) Pvt. Ltd., Rabale	P/o nr: - (client to BV)
Manufacturer: M/s. Inter-Tech Fittings (I) Pvt. Ltd., Rabale	P/o nr: - (client to Manufacturer)
Inspection requested by: M/s. Inter-Tech Fittings (I) Pvt. Ltd., Rabale	

SUPPLY / SUBJECT OF INSPECTION	ITEM / TAG Nr	QTY
Design Proof Test of Eccentric Reducer, as detailed in continuation sheet page 2 of 2.		

DOCUMENTS OF REFERENCE : See continuation sheet for additional documents: Yes No

Title	Reference n°	Rev.	Approved by	Date
Factory-Made Wrought Butt welding Fittings	ASME B 16.9	0	ASME	Ed. 2003

<p>INSPECTIONS :</p> <p>Inspection place & Date or Period: M/s. Intertech – 03.08.10, 26.08.10, 26.02.11 M/s. OTIS – 06.08.10 M/s. John Galt – 16.12.10</p> <p>Stage of inspection :</p> <p><input type="checkbox"/> Before manufacturing <input checked="" type="checkbox"/> During manufacturing <input checked="" type="checkbox"/> Final <input type="checkbox"/> Packing</p> <p>Kind of inspection:</p> <p><input type="checkbox"/> Pre-inspection meeting <input checked="" type="checkbox"/> Witnessing tests <input checked="" type="checkbox"/> Final inspection <input checked="" type="checkbox"/> Document review <input type="checkbox"/> Expediting & vendor assessment <input type="checkbox"/> Packing (for details see continuation sheet)</p> <p>Stamping :</p> <p><input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/> </p>	<p>Results of inspection : <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory</p> <p>Non Conformities Reports (NCR):</p> <p>o NCR's issued during reported period : NIL</p> <p>o List of outstanding NCR's : NIL</p> <p>Main Conclusions & Remarks: (for details see continuation sheet)</p> <p>1) Description / Details of Inspection as per page 2/2.</p> <p>2) Design Proof Test of fitting, witnessed as detailed on page 2/2 & found to be successfully withstanding 105% of the computed proof test pressure without rupturing.</p> <p>Next visit scheduled: -</p> <div style="text-align: right;">   </div>
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(continued)

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(ORIGINAL)

SUBJECT / SUPPLY OF INSPECTION:

SR. NO.	ITEM DESCRIPTION	MATERIAL GRADE	SIZE (NPS)	SCH.	QTY. (nos.)	LOT NO.	HEAT NO.
CS SEAMLESS BW PIPE FITTINGS manufactured by Hollow method (Hot Formed), without subsequent Heat Treatment.							
01	Eccentric Reducer	ASTM A 234 WPB-10	12" x 10"	40	01	ITF.3081	10912831C

DESCRIPTION / DETAILS OF INSPECTION CARRIED OUT:

1. Reviewed & Endorsed Copy of Mill Test Certificates, of Raw Materials (i.e. seamless pipes used for test fitting, pipe end cap and connecting pipe), as declared by manufacturer – found satisfactory.
2. Samples from each lot/heat, from final product of test fitting, drawn for check testing and testing witnessed by BVIL at Lab (for Mechanical & Hardness tests, as applicable) – found satisfactory.
3. Reviewed Lab Check Test Report, for chemical analysis, carried out on above sample – found satisfactory.
4. Visual inspection for surface condition and co-relation of marking, of final product, carried out (100%) - found satisfactory.
5. Dimensional inspection, of final product, carried out (100%), as per relevant dimensional standard - found within tolerance limits.
6. Witnessed Thickness measurement, of final product, using Ultrasonic Thickness Gauge (100%) – found satisfactory.
7. Reviewed & Endorsed Manufacturer's Test Certificate No. ITF/8426/11-12 Dt. 26.02.2011, of M/s. Intertech in EN 10204 Type 3.2 and attached Design Proof Pressure Test Calculation & Coverage Range Sheet (Diameter & Thickness Limits) for the same – found in order.
8. Test Fitting stamped as "✓" for identification.
9. Approved Spool Assembly Setup Drawing and Verified Proof Test Pressure Calculation as per the following formula, $P=2St/D$, where
 P=computed minimum proof test pressure for fitting,
 S=actual tensile strength of the test fitting, determined on a specimen representative of the test fitting,
 t=nominal pipe wall thickness of the pipe that the fitting marking identifies,
 D=specified outside diameter of pipe.
10. Verified the actual testing assembly setup, before hydrostatic test, as per above mentioned approved drawing – found satisfactory.
11. Witnessed Hydrostatic test at ambient temperature, with test fluid as water, of test fitting, at 105% of the computed Proof Test Pressure, at $340 \text{ Kg/cm}^2 \text{ (g)} \approx 4836.1 \text{ psi (g)}$ and found to be withstanding the same without rupture.
12. Verified calibration status of measuring instruments (including Pressure Gauge Sr. No. 4J-3052), used for the above inspection, along with traceability – found in order.
13. Size Range, Thickness Range & Material Grade Range of fittings qualified are as per ASME B 16.9 Clause 9.4.

ANNEXES Yes (Total number of pages: --) No

Inspected by:

Name: D.S. Braganza



Checked by:

Name: D.S. Braganza

Signature:...

Date of issue: 26.02.2011

Inspection centre: BV MUMBAI

Distribution: INTERTECH FITTINGS

BV MUMBAI

INTER-TECH FITTINGS INDIA PVT. LTD.

W-379, TTC INDUSTRIAL AREA, MIDC, RABALE,

NAVI MUMBAI-400701.

TEL. NO. 022-27690052, TELFAX. 022-27699548.

E-mail : itf494@yahoo.co.in

12"NB SCH- 40 PIPE CALCULATION FOR DIAMETER & THICKNESS LIMITS

Outside Diameter (mm)	SIZE IN INCH (NPS)	MIN THK (mm)	Max THK (mm)
168.3	6	2.67	16.05
219.1	8	3.48	20.90
273	10	4.34	26.04
323.8	12	5.15	30.89
355.6	14	5.65	33.92
406.4	16	6.46	38.77
457.0	18	7.27	43.60
508.0	20	8.08	48.46
559.0	22	8.89	53.33
610.0	24	9.70	58.19

Outside Diameter qualified = $1/2D$ to $2D$
= 6" to 24" NPS

Thickness / Diameter ratio = $t/d = \frac{10.31}{323.8} = 0.0318$

= $1/2$ to 3 times t/d ratio

= 0.0159 to 0.0954

(A)
Bhaskar



FOR INTER-TECH FITTINGS INDIA PVT. LTD.

(Q.C.)

