

FLOW TECHNOLOGY LTD  
TEST CERTIFICATE  
VERIFIED TRUE  
COPY OF ORIGINAL

MATERIAL TEST CERTIFICATE



**ANOOP FORGINGS PVT. LTD.**  
(An ISO 9001: 2008 Certified Co.)  
Factory:

J-56, Add. MIDC, Village- Kudawali, Tal. Murbad, Dist. Thane 421401 (India)  
PH (Factory) : ++ 9423839547 / 9423839587  
Fax : 91-22-2164 1741 E-mail :anoopforgings@vsnl.com / anoopforgings@sancharnet.in

<b>CUSTOMER:</b>	PED 97/23/EC and AD 2000 -Merkblatt W0	<b>MTR NO.</b>	26/EXP/12-13
FLOW TECHNOLOGY LTD	Certificate No. 07 202 1423 WZ 0847/10	<b>DATE</b>	26.07.2012
HALF HOUSE LANE,	Directive 97/23/EC, Annex 1, Sect 4.3,	<b>MATERIAL SPECIFICATION</b>	ASTM A182
HOVE EDGE, WEST YORKSHIRE		<b>GRADE</b>	F 316L
BRIGHOUSE. HD6 2PH, UK		<b>DIMENSIONAL SPECIFICATION</b>	As per your Drawing
			Stainless Steel Forgings - Tees & Elbows
<b>ORDER NO.:</b> 005236	<b>DT.</b> 03.12.2011		

CHEMICAL ANALYSIS

Sr. No.	Item Description	Heat No. /Lot No.	Qty	C%	Mn%	Si%	S%	P%	NI%	Cr%	Mo%	Ti%	N2%
STAINLESS STEEL FORGINGS - TEES & ELBOWS													
1	7/8" 90 Deg. Elbow Forging (S2322)	HS-5329/2844	508	0.024	1.650	0.400	0.014	0.043	10.060	16.730	2.060	--	0.0540
2	3/4" 90 Deg. Elbow Forging (S2386)	HS-5329/2844	1000	0.024	1.650	0.400	0.014	0.043	10.060	16.730	2.060	--	0.0540
3	1-1/16" 90 Deg. Elbow Forging(S2310)	HS-5329/2844	1028	0.024	1.650	0.400	0.014	0.043	10.060	16.730	2.060	--	0.0540
4	1-1/16" TEE Forging (S2311)	HS-54752854	483	0.022	1.800	0.390	0.024	0.044	10.060	16.780	2.050	--	0.0562

MECHANICAL PROPERTIES

Heat No. /Lot No.	Item Description	Tensile Strength (N/mm2)	Proof Stress Rp=0.2% ( N/mm2)	Rp= 1% ( N/mm2)	% Elongation %L0=5D	% Reduction Area	Test Temp Deg. C	Charpy V-Notch ( Joules)			Hardness BHN	
								I	II	III	Avg.	
HS-5329/2844	7/8" 90 Deg. Elbow Forging (S2322)	548.33	308.44	390.69	48.57	65.01	20°	146.00	184.00	162.00	164.00	153.00
HS-5329/2844	3/4" 90 Deg. Elbow Forging (S2386)	548.33	308.44	390.69	48.57	65.01	20°	146.00	184.00	162.00	164.00	153.00
HS-5329/2844	1-1/16" 90 Deg. Elbow Forging(S2310)	548.33	308.44	390.69	48.57	65.01	20°	146.00	184.00	162.00	164.00	153.00
HS-54752854	1-1/16" TEE Forging (S2311)	524.49	379.14	396.24	54.29	67.73	20°	175.00	201.00	182.00	186.00	156.00



INSPECTORS STAMP  
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*[Signature]*

WORKS AUTHORISED INSPECTOR

01.04.02

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F12399 - 3/8" BSPP CS MALE X SWIV FEM 90° BLOCK ELBOW 15K 316L

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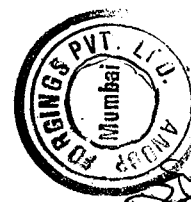
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		<b>DATE</b> 26.07.2012
		<b>MATERIAL SPECIFICATION</b> ASTM A182
		<b>GRADE</b> F 316L
		<b>DIMENSIONAL SPECIFICATION</b> As per your Drawing Stainless Steel Forgings - Tees & Elbows
<b>ORDER NO.:</b> 005236 <b>DT.</b> 03.12.2011		

- : MELTING PROCESS : ELECTRIC FURNACE & REFINING THROUGH AOD
- : HEAT TREATMENT : SOLUTION ANNEALED AT 1050° C AND WATER QUENCHED
- : DIMENSIONS : CONFIRM WITH THE SPECIFICATIONS
- : SURFACE INSPECTION : SATISFACTORY
- : PMI : NO OBJECTION (100% TESTED)
- : INTER GRANULAR CORROSION TEST : PASSED IGC TEST IN ACCORDANCE WITH A262 PRACTICE E
- : MICRO OBSERVATION : NO CARBIDE PRECIPITATION OBSERVED ON THE GRAIN BOUNDARIES
- : RADIOACTIVITY TEST : ALL THE ABOVE MATERIAL ARE TESTED FOR RADIOACTIVITY AND FOUND THAT THERE IS NO RADIO ACTIVE CONTAMINATION.

**WE CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLIES WITH THE ORDER/CONTRACT AND IS OF INDIAN ORIGIN.**  
After Solution Annealing Hardness found less than HRC.22 (237 BHN) according to "NACE MR-01.75-2002"



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