

CERTIFICATE OF INSPECTION & TEST

ORIGINAL



ST&H CORPORATION
 411-3 Shinwol-ri, Jinryemyun, Gimhae-si Gyungnam, Korea
 Tel:82.51.744-4680(5 line) Fax:82.51.744-4670
 E-mail : stcorp@kornet.net

(EN 10204 3.1)

Certified to ISO9001:2008, PED97/23/EC by LRQA
 Report No : MYM6330 Date: MAY.02.2011

Customer : BROWNSVILLE STEEL CITY, LLC										Contract No. : BSC2011-231				Heat Treatment	
Spec. For Material : ASTM/ASME A/SA105-05(NACE MR-0175)															
Chemical Composition (%)		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	AS FORGED		
Heat No.	MAX	0.350	0.350	1.050	0.035	0.040	0.400	0.300	0.120	0.400	0.080				
	MIN		0.100	0.600											
2746		0.200	0.220	0.940	0.011	0.005	0.010	0.040	0.004	0.010	0.008		Dimensional Inspection		
Tension Test						Charpy Impact Test (10x10 mm Specimen Size)				Hardness Test (HB)	Bending Test 90:120(180°)	ANSI B16.5-2003 GOOD			
Size of Specimen(mm)		Yield Strength MPa	Tensile Strength MPa	Elongation %	Red of Area %	Individual		Average						Notch Type	
Dia	Gage Length					min	min	Test Result		Temp					
12.5	50	MAX				①	②	③	Average		187	Ultrasonic Examination			
		MIN	250.000	485.000	22.000	30.000				137					
12.5	50		400.430	559.540	37.290					149-159	N/A				
ITEM / SIZE		Q'TY	ITEM / SIZE			Q'TY	ITEM / SIZE			Q'TY			Magnetic Particle Examination		
150LBS SORF 2"		1	BLANK				BLANK				N/A				
BLANK													Remarks : **CE = 0.37 (LONG FORMULAR)		

NOTE :
 1MPa = 145.037 psi
 1MPa = 0.145037 ksi
 1psi = 0.006895 MPa
 1ksi = 6.89476 MPa

W.C:Water Cool O.C:Oil Cool
 A.C:Air Cool N.A:Non Action
 N:Normalized A:Annealed
 Q.T:Quenched and Tempered
 N.T:Normalized and Tempered

We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

Witnessed by/ K. S. KIM

Manage of Q.A Dept/ Y. M. CHOI