

# CERTIFICATE OF INSPECTION & TEST



**ORIGINAL**



**ST&H CORPORATION**  
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(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)													AS FORGED	
Chemical Composition (%)		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb		
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										
02598		0.202	0.284	0.820	0.014	0.001	0.002	0.018	0.001	0.038	0.003		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							
12.5	50	MAX				Test Result			Temp	187				
		MIN	250.000	485.000	22.000	30.000	①	②		③	Average		137	
12.5	50		351.000	573.000	30.000	65.000				141-153		Ultrasonic Examination		
ITEM / SIZE		Q'TY		ITEM / SIZE			Q'TY		ITEM / SIZE		Q'TY		N/A	
150LBS SORF 3"		1		BLANK					BLANK				Magnetic Particle Examination	
BLANK													N/A	
													Remarks :	
													**CE = 0.35 (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