



# 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 : MYM6262 Date: APR.13.2011

Customer : BROWNSVILLE STEEL CITY, LLC										Contract No. : BSC2011-230				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		Dimensional Inspection		
	MIN		0.100	0.600											
1806Y			0.210	0.240	0.840	0.015	0.010	0.010	0.003	0.004	0.001		ANSI B16.5-2003		
Tension Test						Charpy Impact Test (10x10 mm Specimen Size)				Hardness Test (HB)	Bending Test 90:120(180°)	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		137				
		MIN	250.000	485.000	22.000	30.000			137						
12.5	50		282.500	515.750	33.000	59.250				139-149	Ultrasonic Examination				
ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	N/A			
150LBS WNRF STD 2"		200	BLANK			BLANK			BLANK			Magnafux Examination			
150LBS WNRF STD 4"		1,000										N/A			
150LBS WNRF STD 6"		500										Remarks :			
150LBS WNRF STD 8"		100										**CE = 0.35 (LONG FORMULAR)			
150LBS WNRF STD 10"		100													
NOTE :		W.C:Water Cool O.C:Oil Cool		We hereby certify that the material herein has been made											
1MPa = 145.037 psi		A.C:Air Cool N.A:Non Action		and tested in accordance with the above specification											
1MPa = 0.145037 ksi		N:Normalized A:Annealed		and also with the requirements called for by the above order.											
1psi = 0.006895 MPa		Q.T:Quenched and Tempered													
1ksi = 6.89476 MPa		N.T:Normalized and Tempered													
										Witnessed by/ K. S. KIM		Manager of Q.A. Dept/ Y. M. CHOI			

