

# CERTIFICATE OF INSPECTION & TEST (EN 10204 3.1)

**ST&H CORPORATION**  
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Certificate No. MJW9145A-06/09 Date : MAR. 08. 2016  
 Customer PLESA ANAHUAC Y CIAS., S.A. DE C.V  
 Contract No. 22014  
 Spec. For Material ASTM/ASME A/SA234-14 WPB,NACE MR0175-2009/ ISO15156-1:2015  
 Heat Treatment HOT FORMED (620°C ~ 980°C)

Certified to ISO9001:2008, ISO14001:2004, PED97/23/EC by LRQA

Dimensional inspection ASME B16.9 - 2012

ITEM / SIZE	Q'ty	Heat No./ Batch No.	Size of Test Specimen		Tension Test				Hardness Test (HB)	Charpy Impact Test (10X10mm Specimen Size)			
			D	GL	Y.S MPa	T.S MPa	E.L %	R.A %		Indiv.	Ave.	Notch	Temp.
			mm	mm					Max				
G45ELRSTD10 LR 45D ELBOW STD 10"	2	GBAAL	12.5	50.0	240	415	30.0		197				
G45ELRSTD10 LR 45D ELBOW STD 10"	48	GBABV	12.5	50.0	260	480	34		118 140				
G45ELRS808 LR 45D ELBOW SCH80 8" BLANK	20	WBAAC BLANK	12.5	50.0	290	485	35		119 132				
							BLANK		110 129				
									BLANK				

Heat No./ Batch No.	Max Min	Chemical Composition (%)										NDE							
		C	SI	Mn	P	S	Cr	Mo	Ni	Cu	V			CE	UT	MT	PT		
		0.300	0.100	1.060	0.050	0.058	0.400	0.150	0.400	0.400	0.080					0.430			
GBAAL		0.200	0.230	0.410	0.011	0.010	0.035	0.014	0.012	0.028	0.002					0.281			
GBABV		0.180	0.190	0.430	0.009	0.007	0.014	0.003	0.010	0.015	0.002					0.257			
WBAAC		0.190	0.203	0.450	0.008	0.009	0.034	0.013	0.009	0.015	0.003					0.276			
										BLANK									

REMARK \* CARBON STEEL FITTINGS MADE FROM PIPE  
 \* EXPORT COUNTRY - BUSAN, KOREA  
 \* COUNTRY OF ORIGIN - KOREA  
 \* TOTAL WEIGHT : 19,499 KGS

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.

*[Handwritten Signature]*

Witnessed by / H. J. LEE



Manager of Q.A Dept. / J. W. PARK