

# CERTIFICATE OF INSPECTION & TEST (EN 10204 3.1)



**ST&H CORPORATION**  
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Certificate No. MJW9145A-05/09 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 %	197	Indiv.	Ave.	Notch	Temp.	
			mm	mm										Max
G90ELRS1602 LR 90D ELBOW SCH160 2"	100	WBAGM	12.5	50.0	290	480	38		118	134				
G90ELRS4014 LR 90D ELBOW SCH40 14"	20	WAAFW	12.5	50.0	265	480	35		116	136				
G90ELRS802 LR 90D ELBOW SCH80 2"	200	GBABQ	12.5	50.0	265	470	31		118	138				
G45ELRSTD6 LR 45D ELBOW STD 6"	77	GBABG	12.5	50.0	265	475	36		116	140				
G45ELRSTD6 LR 45D ELBOW STD 6"	23	GBADU	12.5	50.0	275	480	34		116	138				
BLANK		BLANK					BLANK			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			
WBAGM		0.180	0.200	0.410	0.009	0.008	0.020	0.004	0.009	0.011	0.002						0.254			
WAAFW		0.216	0.310	0.520	0.007	0.012	0.018	0.020	0.034	0.026	0.007						0.315			
GBABQ		0.180	0.176	0.432	0.007	0.007	0.031	0.016	0.008	0.011	0.002						0.263			
GBABG		0.180	0.190	0.390	0.008	0.008	0.024	0.003	0.026	0.020	0.002						0.253			
GBADU		0.180	0.210	0.420	0.008	0.006	0.014	0.006	0.014	0.002	0.002						0.255			

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.

*[Signature]*  
 Witnessed by / H. J. LEE



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