

PLEASA ANAHUAC Y CIA.S. S.A. DE C.V.

CONTROL DE CALIDAD

CERTIFICATE OF INSPECTION & TEST

(EN 10204 3.1)

ORIGINAL

FECHA

14/01/2009
1515E1110

FIRMA

E. RUIZ

Date: JAN-02-2009

ST ST&H CORPORATION
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Customer : TUBERIA Y VALVULAS DEL NORTE,S.A Contract No :5656 (PSJ4699) NOV.05.2008 Certificate No :QA90102-01

Spec. for Material	Spec. for Inspection	Surface & Dimension
ASTM A234-05/ASME SA234-05 WPB NACE MR-0175	ASME B16.9	GOOD

ITEM	Heat No.	CHEMICAL COMPOSITION (%)											Tensile Test				Bending Test	Flattening Test	Hardness Test (HB)	Heat Treatment	C.I	
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb	Y.P kgf/mm ² MPa	T.S kgf/mm ² MPa	E (%)	R (%)						
SIZE	Q'TY	MIN	0.10	0.29										240	415	22						
		MAX	0.30	1.06	0.05	0.058	0.40	0.15	0.40	0.40	0.08			655						197		
LR 45D ELBOW STD			0.23	0.25	0.53	0.009	0.008	0.03	0.01	0.02	0.05	0.01		320	505	31			GOOD	<197	HF	0.3
18"	30	03791																				
LR 45D ELBOW STD			0.23	0.25	0.53	0.009	0.008	0.03	0.01	0.02	0.05	0.01		320	505	31			GOOD	<197	HF	0.3
20"	30	03791																				
LR 45D ELBOW STD			0.2	0.24	0.55	0.008	0.01	0.05	0.02	0.009	0.12	0.01		245	485	31			GOOD	<197	HF	0.3
24"	20	04563																				
LR 90D ELBOW STD			0.23	0.25	0.53	0.009	0.008	0.03	0.01	0.02	0.05	0.01		320	505	31			GOOD	<197	HF	0.3
20"	20	03791																				
LR 90D ELBOW STD			0.2	0.24	0.55	0.008	0.01	0.05	0.02	0.009	0.12	0.01		245	485	31			GOOD	<197	HF	0.3
24"	50	04563																				

- Reviewed By
- Witnessed By

NOTE . HF : Hot formed (620 ~ 980 °C) and cooled in still air
N : Normalized (850 X 0.5HR)

1MPa = 145.037 psi
1MPa = 0.145037 ksi
1psi = 6894.76 MPa
1ksi = 6.89476 MPa

Chow

We hereby certify that the material herein has been made and tested in accordance with above specification and the results of all test are acceptable.

C.E.=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Manager of Q.A Dept.