

Test Certificate

EN 10204 3.1

Customer	PROVEEDORA DE MATERIALES ANGER, S.A DE C.V.- 330	Certificate No.	6728
P.O.No		Certificate Date	14/02/2017
P.O.Date	19/10/2015	Inspection By	AFL
Material Spec.	ASTM A234 Gr. WPB ED.2013	Dimensional Standard	ASME B16.9 ED.2012

Sr No	Party Code	Size (Inch)	Item	Sch	Qty	ID No.	HT	Hardness (BHN)	Remarks
1		6	TEE	XH	69	E256	SR	138-144	
2		4	45 Deg. LR ELBOW	STD	424	E334	HF	140-152	
3		5	45 Deg. LR ELBOW	STD	258	E333	HF	142-150	
4		2	90 Deg. LR ELBOW	STD	3276	E343	HF	138-150	
5		8	90 Deg. LR ELBOW	XH	30	E345	HF	142-148	
6		4	TEE	XH	390	E291	SR	140-152	
7		8	90 Deg. LR ELBOW	STD	15	E332	HF	144-150	

ID NO.	Chemical Composition (%)														Physical Properties(Product)			
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	Cb	Ti	Nb	V	C.E	UTS MPa	0.2% Proof Stress Mpa	EL %	RA %
E256	0.2060	0.3930	0.0110	0.0150	0.2520	0.0070	0.0400	0.0680	0.0020	-	-	-	0.0030	0.289	509.00	336.00	28.80	-
E334	0.2200	0.4400	0.0200	0.0180	0.2160	0.0040	0.0500	0.0140	0.0010	-	-	-	0.0020	0.300	482.00	327.00	31.05	-
E333	0.2100	0.5000	0.0280	0.0050	0.3120	0.0050	0.0480	0.0150	0.0020	-	-	-	0.0020	0.301	467.00	356.00	23.28	-
E343	0.1800	0.5400	0.0220	0.0080	0.2400	0.0300	0.0020	0.0200	0.0010	-	-	-	0.0010	0.277	505.00	327.00	31.00	-
E345	0.1900	0.5600	0.0210	0.0060	0.2200	0.0100	0.0030	0.0100	0.0020	-	-	-	0.0010	0.287	535.00	343.00	30.00	-
E291	0.2160	0.3830	0.0080	0.0120	0.2170	0.0150	0.0090	0.0400	0.0020	-	-	-	0.0010	0.290	458.00	311.00	42.50	-
E332	0.1900	0.4600	0.0200	0.0250	0.2140	0.0040	0.0270	0.0160	0.0010	-	-	-	0.0010	0.272	433.00	310.00	37.52	-

Heat Treatment

Heat Treatment Code	Heat Treatment Particulars
HF	Hot formed at 620°C to 980°C and subsequently cooled in still air. Stress Relieved at 675°C & subsequently cooled in still air.
SR	

REMARKS: 1) Material was manufactured, sample tested and inspected in accordance with indicated specifications and was found to meet the requirements. (2) Test Specimens :- Transverse (3) Starting Material :- Carbon Steel Seamless Pipe ASTM A106 Gr. B ED.2013 (4) No weld repair was performed. (5) Material Conforms to NACE MR0175-2007 / NACE MR103-2007 Only Hardness.

MARKING DETAILS: MATERIAL GRADE,SIZE,SCH..COUNTRY OF ORIGIN,COMPANY LOGO

We here by certify that the products enlisted above have been supplied in accordance with the purchaser's requirement and the test results mentioned above are correct.


Engineer (Quality Assurance).