

6600 South Harlem Avenue  
 Argo, IL 60501-1930  
 Phone: (708) 594-1700  
 Fax: (708) 458-0106



**MATERIAL TEST REPORT  
 FITTINGS**

To: PLESA ANAHUAC Y CIAS. S.A DE C.V.  
 LAREDO,  
 Attn: HUMBERTO

Description	Heat I	Steel Producer	Heat II	Steel Producer	Yield	Elong	BHN							
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Cb	V	Ten	Yield	Elong	BHN
Carbon Equivalence Notes:														
20" Std LR 90° Elbow	23333	VALLOUREC/MANNESMANN	23333	VALLOUREC/MANNESMANN	45687	41.20	156							
0.245	109	.623	.008	.003	.207	.089	.074	.078	.026	.001	.001	61931	45687	41.20
20" Std LR 90° Elbow	24618	VALLOUREC/MANNESMANN	24618	VALLOUREC/MANNESMANN	46557	39.20	149							
0.262	103	.615	.014	.004	.272	.113	.073	.090	.027	.000	.002	62511	46557	39.20
20" Std LR 90° Elbow	23927	VALLOUREC/MANNESMANN	23927	VALLOUREC/MANNESMANN	51053	41.20	149							
0.250	120	.601	.010	.003	.219	.080	.066	.066	.030	.000	.003	65266	51053	41.20
20" Std LR 90° Elbow	24064	VALLOUREC/MANNESMANN	24064	VALLOUREC/MANNESMANN	52646	39.20	149							
0.259	110	.618	.011	.007	.202	.086	.085	.139	.034	.000	.001	69183	52646	39.20

All fittings meet the requirements of ASTM A-234 WPB, (and SA-234) and are seamless except as noted. Starting Material Seamless Pipe for elbows, tees and reducers, Plate for caps and welded fittings ISO 9001:2000 CERTIFIED MANUFACTURER All fittings meet NACE MRO-175 - Latest Revision



August 20 2004  
 By Report sent digitally. Signature available on request  
 Quality Assurance Department  
 Test Results herein are correct as contained in test records retained by the company.  
 In accordance with EN 10 204 Para 3.1 B