

Purchaser: TUBOS DE ACERO DE MEXICO S.A

INSPECTION CERTIFICATE

EN 10204 3.1B

E-No. MAA-139 Purchase Order No. 3500014172 Job No.

D M Y Certificate No. 02/06/2005 T. 2005740005

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-03/ASME SA234 WPP										Specification for Inspection ASME B16.9		Visual Examination Good	Dimensional Inspectic Good	
		Product & Size										Quantity	Heat Treatment (Note 1)			
		(T+1)														
1	05E10305	T WPB 2 1/2 SA40										190/1,279	N			
2	05C10191	T WPB 3 SA40										226/3,187	S			
3	05C10192	T WPB 3 SA40										382/3,187	S			
4	05E10201	T WPB 2 1/2 SA40										112/1,279	S			
5	05E10325	T WPB 2 1/2 SA40										400/1,279	N			
Specification	Material Heat No.	Chemical Composition %										Tension Test *2				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E
		X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100	MPa	MPa	%
		Min.	10	29										240	415	30
Max.	30		106	50	58	40	40	40	15	80	20			585		
1	J3K6226	19	18	69	12	6	2	2	5	0	1	32	300	466	65	
2	J4K7626	19	20	63	12	9	3	3	6	1	1	31	308	480	55	
3	33948	18	19	65	11	1	4	2	3	1	1	30	329	475	36	
4	J5K1215	19	20	78	14	7	1	2	5	1	0	33	314	484	61	
5	J3K6226	19	18	69	12	6	2	2	5	0	1	32	300	466	65	



(NOTE 1) A : HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820 C - 890 C, AIR COOLING
 N : NORMALIZING 810 C X 0.5 HR. AIR COOLING S : STRESS RELIEVING 875 C X 0.5 HR. AIR COOLING
 C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 MAGNETIC PARTICLE EXAMINATION FOR THE ONLY : GOOD
 We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned
 and also with the purchaser's requirements and that the test results shown herein are correct.
 * 1 : "m" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation
 TZ-61

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