

E.No. **MA-139** Purchase Order No. **3600014172** Job No. \_\_\_\_\_ D M Y Certificate No. **02/06/2005 T-2005740006**

No.	MFG. No. (Heat Identification No.)	Specification for Material		Specification for Inspection		Visual Examination	Dimensional Inspectio										
		Made from Seamless Pipe ASTM A234-03/ASME SA234 WPB	Product & Size	Quantity	Heat Treatment (Note 1)			Good	Good								
1	OSD10101	T WPB 3 S40	(T*1)	1,306/3,187	S												
2	OSD10121	T WPB 3 S40		948/3,187	S												
3	OSE10907	T WPB 3 S40		103/3,187	N												
4	OSE10315	T WPB 3 S40		222/3,187	N												
5	OSB10141	T WPB 4 S40		171/2,131	S												
Specification		Chemical Composition %						Tension Test *2									
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	MPa	TS	E
	Min.	X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100				
	Max.		10	29										240	415	30	HARDNESS MAX
	Material Heat No.	30		108	50	58	40	40	40	15	80	20			585		197 HB : GOOD
1	J4KA542	19	20	63	12	9	3	3	6	1	0	1	31	319			
2	J4KA542	19	20	63	12	9	3	3	6	1	0	1	31	319	474		47
3	J4K9396	18	19	66	21	6	2	2	6	0	0	1	30	320	483		36
4	J4KC509	18	21	68	13	6	1	2	7	2	0	1	31	302	487		37
5	J2K9525	20	21	56	20	6	2	3	6	0	0	0	31	325	475		39

(NOTE 1) A : HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820 C - 880 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 :

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.

Quality Assurance Manager  
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