

INSPECTION CERTIFICATE

EN 10204 3.1B

No. A-139 Purchase Order No. 3500014172 Job No. 02/06/2005 T-2005740012

D M Y Certificate No.

urchaser: TUBOS DE ACERO DE MEXICO S.A. Tanco

No.	MFG. No. (Heat Identification No.)	Specification for Material		Specification for Inspection		Visual Examination	Dimensional Inspe
		Product & Size	Heat Treatment (Note 1)	Quantity	Heat Treatment (Note 1)		
1	05E10140	T WPB 6 S40	S	785/1,114	S	Good	Good
2	05E10141	T WPB 6 S40	S	229/1,114	S		
3	05B10164	T WPB 6 S80	S	80/165	S		
4	05E10103	T WPB 6 S40	S	19/1,114	S		
5	05E10104	T WPB 6 S40	S	81/1,114	S		

Material Heat No.	Chemical Composition %											Tension Test *2			E
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	MPa.	
1	18	20	53	12	8	3	2	5	1	0	1	28	312	470	60
2	18	20	53	12	8	3	2	5	1	0	1	28	312	470	60
3	19	21	68	10	1	5	5	3	1	1	1	32	305	476	40
4	19	19	55	16	8	2	2	6	1	0	1	30	310	465	45
5	19	19	55	16	8	2	2	6	1	0	1	30	310	465	45

Specification	Min.		Max.	
	C	Si	Mn	P
	X/100	X/100	X/100	X/1000
		10	29	
			106	50

NOTE 1) A : HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620 C - 980 C, AIR COOLING
 B : NORMALIZING 910 C - 930 C, AIR COOLING
 S : STRESS RELIEFING 775 C, AIR COOLING FOR TENSILE 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.

Quantity Assurance Manager
 Thai Benkan Co., Ltd.
 58 Soi Watkranaei, Bangkok, Prapudeng,
 Samutprakarn, 10130 Thailand.

1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation Z-61