VOLZHSKY TRUBNY

"VOLZHSKY PIPE PLANT"
OJSC

MILL TEST CERTIFICATE

MANUFACTURER:

VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

DESCRIPTION OF GOODS:
SEAMLESS CARBON STEEL PIPE, HOT ROLLED, BEVEL ENDS ACCORDING TO:
NORM/GRADE ASTM/ASME A/SA 53.06/106.06 API 5L 2004. PSL1. GRADE B/X42
FOR USE IN GASODUCTOS Y OLEODUCTOS

"TMK NORTH AMERICA INC."
2700 POST OAK BOULEVARD, SUITE 2425
HOUSTON, TX 77056, USA

CERTIFICATE N 2028 DATE OF ISSUE 21.09.2007

SIZE	HEAT No / HEAT TREATMENT LOT No	LOT No	QUANTITY, PIPES	LENGTH, METRES	NET WEIGHT TONS	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cr x 100	Ni x 100	Cu x 100	Mo x 100	Ti x 100	Nb x 100	MILL CONTROL PROT. No	ORIENTATION	TEST SPECIMEN	YS MPA	UTS MPA	EL. %	HARDNESS TEST	ORIENTATION	NOTCH	SIZE	TEST TEMP °C	INPUT VALUE J	FRACTURE %	HEAT TREATMENT	N D T	DURATION (SECONDS)	PRESSURE KG/CM2 (MPa)	NOTE
						CHEMICAL COMPOSITION, %												TENSILE TEST						IMPACT TEST										
						*1	24 max		140 max	25 max	15 max	30 max	30 max		4 max			*2	*3	*4	min 414.00 max 565.00	min 517.00 max 758.00	min 24.0		*3	*5	*6	0	*7 min 27.00	min 20.0	*8	*9 * (10)	min 5	min 211.14 (20.70)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
GRADE B						H	13	22	84	12	4	10	10	17	1	1	3			L	K					T	V	F				Q&T	M & EMI (12)	G	G	CHEMICAL COMPOSITION,%
323.1 x						P	13	22	84	12	4	10	10	16	1	1	3	9312																	I I V I B I
12.7 MM						P	13	22	84	11	3	10	10	16	1	1	3	9312																	I I x I x I
API 5L.PSL2	271503	3-0710																																	I 1 I100 I10000I
43-th																																			I I----I-----I
EDITION	11																	2436	L			494	587	39.4					0	A	166.5	85			I H I 5 I 3 I
LENGTH:																														E	162.3	85			I P I 5 I 3 I
6.0-12.5 M																															170.3	85			I P I 5 I 3 I
																															167.0	85			
																																			Nb+V+Ti<=0.15%
																																			H I Nb+V+Ti=9
																																			P I Nb+V+Ti=9
																																			P I Nb+V+Ti=9
																																			CE(IIW)<=0.43%
																																			CE(Pcm)<=0.25%
																																			I CE(IIW) CE(Pcm) I
																																			HI 32 I - I
																																			PI 32 I - I
																																			PI 32 I - I

TUBOS Y BARRAS NOVA DE MEXICO, S.A. DE C.V.
CLIENTE: Plesa Anahuac y CIAS, SA de CV
24 FEB. 2012
PEDIDO: 283818
CANTIDAD: 24.36 mts

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONS	BEVELING INSPECTION	END'S PROTECTORS	NONDESTRUCTIVE INSPECTION	COATING								MARKING: STENCILING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G								G	

NOTES: G: GOOD
*1: H: HEAT ANALYSIS, P: PRODUCT ANALYSIS, C: CONTROL ANALYSIS, R: RECHECK ANALYSIS
*2: L: LOT TEST, H: HEAT CONTROL TEST, A: ADDITION TEST, R: RECHECK TEST
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: STRIP G: 1/2 in, H: 3/4 in, M: 1 in, K: 1 1/2 in, S: 12 mm.
*5: V: 2mm V, U: 2mm U, B: 3mm U, C: 4mm U, E: 2mm U FASE NOTCH, F: 2mm V FASE NOTCH
*6: F: 10x10mm, 7: 10x7.5mm, 6: 10x6.7mm, 5: 10x5mm, 3: 10x3.3mm, 2: 10x2.5mm
*7: E - EACH VALUE, A - AVERAGE VALUE
*8: HEAT TREATMENT, Q&T: QUENCHED & TEMPERED
*9: M: WET FLUORESCENT MAGNETIC PARTICLE TEST, EMI: ELECTROMAGNETIC TEST, UT: ULTRASONIC TEST
UTB: PIPE BODY UT FOR LAMINATION, UTE: PIPE ENDS UT FOR LAMINATION
UTS: PIPE WALL THICKNESS UT
*10: 5 - NOTCH 5%, 12 - NOTCH 12.5%

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE: 15.09.07