MILL'S QUALITY CERTIFICATES

HISTEEL CO. , LTD.

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CERTIFICATE NO : HIE2007-0014 PAGE : 2

DATE OF ISSUE : Jan. 25, 2007

L/C NO (P/O NO) : 1103044854

COMMODITY : 1,395.71MT OF WELDED STEEL PIPE, ASTM 500GR-B AS PER FOLLOWING B/ DOWN

SPECIFICATION : ASTM 500 GR-B

CUSTOMER : DUFERCO SA

TYPE OF PIPE END	DIMENSION (OUTDIA.×THICK.×LENGTH)			QUAN-TITY (PCS)	WEIGHT (KG)	HYDRO-STATIC TEST Kg/㎠ PSI	HYDRO-STATIC TEST ※5	HEAT-NO.	PHYSICAL PROPERTIES YIELD STRENGTH	TENSILE STRENGTH B ※6	TENSILE STRENGTH W ※7	(EL)	CHEMICAL COMPOSITION															IMPACT TEST (0 ℃) ENERGY	IMPACT TEST (0 ℃) SHEAR-VALUE	REMARK (HARDNESS)
														C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	Ti	B	HARDNESS	Ceq			
※1	※2	※3	※4						PSI			%	※8	×100			×1000		×100				×1000				HV	×1000	JOULE	%	
BPE	NB	8"X4" X 0.500" X 40'		5	3,200			H060901	53,936	67,421		23	H	17	9	46	16	4													
BPE	NB	8"X4" X 0.500" X 40'		16	10,241			SB52702	46,542	64,086		29	H	19	1	77	14	5													
BPE	NB	8"X6" X 0.375" X 40'		68	40,209			R061011	47,122	69,595		25	H	17	8	98	17	14													
BPE	NB	8"X8" X 0.250" X 40'		72	33,708			C070104	46,252	62,346		31	H	12	1	63	15	7													
BPE	NB	8"X8" X 0.313" X 40'		3	1,734			SP41557	47,412	70,465		25	H	18	1	78	13	8													
BPE	NB	8"X8" X 0.313" X 40'		44	25,428			H060904	49,152	69,161		25	H	17	9	44	6	9													
BPE	NB	8"X8" X 0.313" X 40'		32	18,493			H061126	54,806	67,566		26	H	18	7	44	9	6													
BPE	NB	8"X8" X 0.375" X 40'		46	31,463			H060903	54,661	68,291		26	H	18	8	47	15	6													
BPE	NB	8"X8" X 0.500" X 40'		56	49,636			H060902	53,502	66,696		26	H	18	8	47	16	10													
		TOTAL		1,406	562,026																										

※9 P.S.A	※10 VISUAL & DIMENSION TEST	※11 FLATTENING (B) TEST	※12 WELD DUCTILITY TEST	※13 NONDESTRUCTIVE TEST (U.T)	※14 DRIFT TEST	※15 FLARING TEST	※16 CRUSH TEST	※17 REVERSE FLATTENING TEST
	GOOD							

NOTE 1 ※1 Type of pipe End

BPE :Black Plain End Square-cut	GPE :Galvanized Plain End Square-cut
BPEB :Black Plain End Beveled	GPEB :Galvanized Plain End Beveled
BTC :Black Threaded & Coupled	GTC :Galvanized Threaded & Coupled
BVJ :Black Victaulic Joint	GVJ :Galvanized Victaulic Joint
ETC :Enameled Threaded & Coupled	

※ 2 NB:Norminal Bore, OD:Outside Diameter
※ 3 Unit (M:mm, I:Inch)
※ 4 Unit (M:Meter, F:Feet, I:Inch)
※ 5 G:Good
※ 6 Base Metal
※ 7 W : Weld Part
※ 8 H:Heat (Ladle) Analysis, P:Product Analyics
※ 9 POST SEAM ANNEALING
※10 Visual & Dimension Test
※11 Flattening or Bending Test
※12 Weld Ductility Test
※13 Nondestructive Test
※14 Drift Test
※15 Flaring Test
※16 Crush Test
※17 Reverse Flattening Test

ORIGINAL

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER

SUPERVISOR

INSPECTION MANAGER

HISE-103-06(0)

HISTEEL CO., LTD

A4(210X297)