MILL'S QUALITY CERTIFICATES

HISTEEL CO. , LTD.

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CERTIFIGATE NO : HIE2007-0012 PAGE : 2

DATE OF ISSUE : Jan. 19, 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 STREN-GTH	TENSILE STRENGTH B ※6	TENSILE STRENGTH W ※7	(EL)	CHEMICAL COMPOSITION	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	Ti	B	HARDNESS	Ceq	IMPACT TEST (0 ℃) ENERGY	IMPACT TEST (0 ℃) SHEAR-VALUE	REMARK (HARDNESS)
※1	※2	※3	※4						PSI			%	※8	×100			×1000		×100				×1000				HV	×1000	JOULE	%	
BPE	NB	8"X8" X 0.250" X 40'		144	67,417			C070104	46,252	62,346		31	H	12	1	63	15	7													
		TOTAL		1,248	833,684																										

※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 Analysis
※ 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