MILL TEST CERTIFICATE

CERTIFICATE NO : HIE2006-157 PAGE : 1

DATE OF ISSUE : May. 24, 2006

L/C NO (P/O NO) :

COMMODITY : ERW STEEL STRUCTURAL TUBING

SPECIFICATION : ASTM A500 GR. B

ORIGINAL

CUSTOMER : DUFERCO

HISTEEL CO. , LTD.

400-830

HEAD OFFICE & INCHON PLANT : 898BLOCK 4LOT, GOZAMDONG, NAMDONG-KU, INCHON, KOREA
TEL : (032)815-6386-8
FAX : (032)815-6389

100-006

SEOUL OFFICE : 57-6, CHUNGMU-RO 3-GA, JUNG-KU , SEOUL, KOREA
TEL : (02)2273-2141-3
FAX : (02)2273-2157

ORIGINAL

TYPE OF PIPE END	DIMENSION (OUTDIA. × THICK. × LENGTH)			QUAN-TITY (PCS)	WEIGHT (KG)	HYDRO-STATIC TEST Kg/cm²	HYDRO-STATIC TEST PSI	HEAT-NO.	TENSILE TEST YIELD STREN-GTH	TENSILE STRENGTH B	TENSILE STRENGTH ※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				※5		Kg/mm²				%	※8	×100			×1000		×100				×1000				HV	×1000	JOULE	%	
BPE	NB	10"X10" X 0.250" X 40'		116	68,504			IN060301	38.1		43.2		26	H	7	2	76	7	6													
BPE	NB	10"X10" X 0.313' X 40'		48	35,122			IN060302	37.8		43.3		26	H	6	3	77	11	2													
BPE	NB	10"X10" X 0.375' X 40'		130	113,044			IN060304	35.6		43.3		24	H	5	2	79	9	6													
BPE	NB	4"X4" X 0.313" X 40'		63	17,027			SP19345	34.1		50.9		27	H	18	1	75	12	5													
BPE	NB	4"X4" X 0.313" X 40'		118	31,892			SR09741	38.9		46.5		26	H	8	1	53	9	4													
BPE	NB	4"X4" X 0.375" X 40'		162	50,625			SR09744	37.0		46.2		25	H	5	1	57	10	5													
BPE	NB	6"X6" X 0.313" X 40'		18	7,606			IN060303	35.5		44.6		25	H	5	3	79	9	5													
BPE	NB	8"X8" X 0.313" X 40'		60	34,615			IN060303	35.5		44.6		25	H	5	3	79	9	5													
BPE	NB	12"X8" X 0.375" X 40'		60	50,000			IN060304	35.6		43.3		24	H	5	2	79	9	6													
		TOTAL		775	408,435																											

※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:Nominal 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

SUPERVISOR

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

INSPECTION MANAGER