# MILL TEST CERTIFICATE

HISTEEL CO. , LTD.

HEAD OFFICE & INCHON PLANT : 89BLOCK 4LOT, GOZANDONG, NAMDONG-KU, INCHON, KOREA 405-310
TEL : (032)815-6386-8
FAX : (032)815-6389

SEOUL OFFICE : 57-8, CHUNGMU-RO 3-GA, JUNG-KU , SEOUL, KOREA 100-013
TEL : (02)2273-2141~3
FAX : (02)2273-2157

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L/C NO (P/O NO) : 1103037682

COMMODITY : ERW STEEL STRUCTURAL TUBING

CUSTOMER : DUFERCO SA

SPECIFICATION : ASTM A500 GR. B

| TYPE OF PIPE END | DIMENSION (OUTDIA. × THICK. × LENGTH) | | | QUAN-TITY (PCS) | WEIGHT (KG) | HYDRO-STATIC TEST Kg/cm² PSI | HYDRO-STATIC TEST ※5 | HEAT-NO. | TENSILE TEST 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 | 10"X10" X 0.500" X 40' | | 67 | 75,887 | | | SP58233 | 46,252 | 67,711 | | 30 | H | 19 | 1 | 80 | 13 | 8 | | | | | | | | | | | | | |
| BPE | NB | 12"X8" X 0.500" X 40' | | 24 | 27,183 | | | SP58233 | 46,252 | 67,711 | | 30 | H | 19 | 1 | 80 | 13 | 8 | | | | | | | | | | | | | |
| BPE | NB | 8"X4" X 0.500" X 40' | | 72 | 46,086 | | | SB52702 | 46,107 | 64,086 | | 29 | H | 19 | 1 | 77 | 14 | 5 | | | | | | | | | | | | | |
| | | TOTAL | | 163 | 149,156 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ※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

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|---|---|
| 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 Code Analysis, P:Product Analysis
※ 9 POST SEAM ANNEALING
※10 Visual & Dimension Test
※11 Flattening Test
※12 Weld Ductility Test
※13 Nondestructive Test
※14 Drift Test
※15 Flaring Test
※16 Crush Test
※17 Reverse Flattening Test

ORIGINAL

SUPERVISOR

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

INSPECTION MANAGER