# MILL'S QUALITY CERTIFICATES

**SeAH SeAH Steel Corp.**
**(주)세 아 제 강**

HEAD OFFICE ; BONGNAE-DONG 1GA, JUNG-GU, SEOUL, KOREA
POHANG PLANT ; 14-1, JANGHEUNG-DONG, NAM-GU, POHANG

증명서번호
CERTIFICATE NO. : E200709-0081-002317(5002028)
제 품 명
COMMODITY : E.R.W STEEL PIPE
제 품 규 격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2006)

발 급 일 자
DATE OF ISSUE : 2007.09.21
계 약 서 번 호
L/C No. (P/O No.) : PLESA
수 요 가
CUSTOMER : DUFERCO SA
주 문 자
SHIPPER : SEAH STEEL CORPORATION

| NO. | HEAT NO. (BATCH NO.) | 관 단 TYPE *1 | 주 문 치 수 ORDER SIZE | 수 량 QUANTITY 본 수 PCS | 총 길 이 TOTAL LENGTH | 중량(M/T) WEIGHT | 비 고 REMARK |
|---|---|---|---|---|---|---|---|
| 20 | C714191 (SIH9041090) | BBE | 18 " X 0.500 " X 6.120 M | 2 | 12.240 M | 1.703 | PO.NO :1103054906 |
| 21 | C714186 (SIH9041110) | BBE | 18 " X 0.500 " X 6.120 M | 47 | 287.640 M | 40.025 | |

| NO. | HEAT NO (BATCH NO.) | HYDROSTATIC TEST 5 Sec. psi | RESULT | N.D.T U *2 | VISUAL & DIMENSION | FLATTENING | SHOCK | COMPRESSION | RESIDUAL MAGNETISM GAUSS | BENDING *3 | DRIFT | CRUSH | FLARING | FLANGE | REVERSE FLATTENING | ZINC COATING TEST WEIGHT OF ZINC COATING | 균일성 C.S *4 | 알칼리 ALK *5 | CHEMICAL COMPOSITION(%) DESIG *6 | C | Si | Mn | P | S | CU | NI | CR | MO | V | CEQ *8 | TENSILE TEST (Gage Length : 50mm) DIR *9 | TENSILE STRENGTH psi | YIELD STRENGTH psi | E.L % *10 | IMPACT TEST (℃) ENERGY Joule | SHEAR AREA % | HARDNESS TEST | HEAT TREATMENT SN *11 | PROTECTIVE COATING & LINING THICKNESS | P.H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | 2 | | | 3 | | 2 | 2 | 2 | 2 | 3 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | *7 | | | | | | | | | | | | | | | | | | |
| 기준 SPEC | | | | | | | | | 30 | | | | | | | | | | MAX | 26 | | 120 | 30 | 30 | 40 | 40 | 40 | 15 | 80 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | MIN | | | | | | | | | | | | | 60000 | 35000 | | | | | | |
| 20 | C714191 (SIH9041090) | 1170 | G | G | G | G | | | G | | | | | | | | | | H | 16 | 2 | 76 | 12 | 10 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | P | 15 | 3 | 77 | 10 | 11 | 2 | 2 | 1 | 1 | 2 | | T | 68410 | 47070 | 41 | | | | G | | |
| | | | | | | | | | | | | | | | | | | | P | 16 | 3 | 77 | 10 | 10 | 1 | 2 | 2 | 1 | 1 | | W | 68841 | | | | | | | | |
| 21 | C714186 (SIH9041110) | 1170 | G | G | G | G | | | G | | | | | | | | | | H | 17 | 2 | 76 | 20 | 9 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | P | 16 | 1 | 75 | 21 | 8 | 1 | 2 | 2 | 1 | 2 | | T | 70830 | 47360 | 39 | | | | G | | |
| | | | | | | | | | | | | | | | | | | | P | 16 | 1 | 76 | 22 | 8 | 1 | 2 | 3 | 1 | 1 | | W | 70263 | | | | | | | | |

NOTE *1 ~ *12 : Refer To The Attached Section Designation

OTHER

Surveyor :

· WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH ABOVE SPECIFICATION AND THE RESULTS OF ALL TEST ARE ACCEPTABLE.
· THE USE OF THE MATERIAL OUTSIDE THE SPECIFICATIONS INDICATED ON THIS CERTIFICATE MAY CAUSE SAFETY AND/OR MONETARY PROBLEMS. FURTHERMORE, ANY ORGANIZATION OR PERSON(S) WHO DELIBERATELY MODIFIES THE CERTIFICATE WILL BE PROSECUTED FOR FORGING AN OFFICIAL DOCUMENT (ACCORDING TO THE PROVISIONS OF THE CRIMINAL CODE 231)

Manager of Q.M Dept.

J. E. KIM