

MILL'S QUALITY CERTIFICATE

SeAH SeAH Steel Corp. (주)세아제강

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

발급일자
DATE OF ISSUE : 2010.03.31
계약서번호
L/C No. (P/O No.) : 1103077721
수요가 :
CUSTOMER : PLESA
주문자 :
SHIPPER : DUFERCO SA

증명서번호
CERTIFICATE NO. : E201004-0133-000861(5005298)
제품명
COMMODITY : E.R.W STEEL PIPE
제품규격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

| NO. | HEAT NO. (BATCH NO.) | 관단 TYPE *1 | 주문치수 ORDER SIZE | | | 수량 QUANTITY | | | 비고 REMARK |
|-----|-------------------------|------------------|--------------------|-----------|-----------|-------------|---------------------|-------------------|---|
| | | | 20 " | X 0.500 " | X 6.120 M | 본수 PCS | 총길이 TOTAL LENGTH | 중량(M/T) WEIGHT | |
| 9 | C020317 (SIK3111110) | BBE | 20 " | X 0.500 " | X 6.120 M | 4 | 24.480 M | 3.797 | CONFIRM TO NACE NORM MRO175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY |
| 10 | SA40134 (SIK3241080) | BBE | 20 " | X 0.250 " | X 6.120 M | 33 | 201.960 M | 15.987 | |

| NO. | HEAT NO. (BATCH NO.) | HYDROSTATIC TEST | | N·D·T RESULTS *2 | V·I·S·U·A·L & S·I·M·U·L·T·A·N·E·O·U·S TESTING *3 | F·L·A·T·T·E·N·I·N·G SHOCK C·O·M·P·R·E·S·S·I·O·N R·E·A·G·N·E·D·I·T·I·S·M G·A·U·S·S *3 | B·E·N·D·I·N·G D·R·I·F·T C·R·U·S·H F·L·A·R·I·N·G F·L·A·N·G·E R·E·V·E·R·T·E·N·I·N·G | ZINC COATING TEST | | CHEMICAL COMPOSITION(%) | | | | | | | | | | | | | TENSILE TEST (Gage Length : 50mm) | | | IMPACT TEST (°C) | | HARD- NESS TEST HRC | HEAT TREAT MENT SN | | | | | | | | | | | | | |
|------------|-------------------------|------------------|-----|------------------------|--|---|--|--------------------------------|-------|-------------------------|----|----|---|---|----|----|----|----|------------|----|----|-----|--------------------------------------|---------------------|-------------------|---------------------|-------------|------------------------------|-----------------------------|---------------|----|--|---|-------|-------|----|--|--|---|---|---|---|
| | | 10 Sec. | psi | | | | | WEIGHT OF ZINC COAT- ING | DESIG | C | Si | Mn | P | S | Cu | Ni | Cr | Mo | V | Nb | Ti | CEQ | D I R | TENSILE STRENGTH | YIELD STRENGTH | E.L | ENE- RGY | | | SHEAR AREA | | | | | | | | | | | | |
| | | | | | | | | | | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | | | | | | psi | psi | % | Joule | | | % | | | | | | | | | | | | |
| | | | | | | | | *4 | *5 | *6 | *7 | | | | | | | *8 | *9 | | | *10 | | | | | | | | | | | | | | | | | | | | |
| 기준 SPEC | | | | | | 30 | | | | | | | | | | | | | MAX MIN | 26 | | 120 | 30 | 30 | 40 | 40 | 40 | 15 | 80 | | | | | | | 22 | | | | | | |
| 9 | C020317 (SIK3111110) | 1070 | G | G | G | G | | | | | | | | | | | | | H | 15 | 16 | 79 | 14 | 4 | | | | | | | | | | | | | | | | | | |
| 10 | SA40134 (SIK3241080) | 540 | G | G | G | G | | | | | | | | | | | | | P | 14 | 16 | 78 | 16 | 3 | 2 | 1 | 2 | TR | 2 | 1 | TR | | T | 74690 | 58450 | 32 | | | 9 | G | | |
| | | | | | | | | | | | | | | | | | | | P | 14 | 15 | 79 | 16 | 5 | 2 | 1 | 2 | TR | 2 | 1 | TR | | W | 80640 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | H | 15 | 2 | 67 | 15 | 6 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | P | 14 | 2 | 67 | 16 | 8 | 1 | 2 | TR | TR | 1 | TR | TR | | T | 68890 | 47860 | 37 | | | | | 7 | G |
| | | | | | | | | | | | | | | | | | | | P | 15 | 2 | 67 | 16 | 8 | 1 | 2 | TR | TR | 1 | TR | TR | | W | 73380 | | | | | | | | |

OTHERS
*1~*11: Refer To Others
*1-BBE:Black Beveled End(30°)
*2-U:Weld Seam Ultrasonic Test
*6-H:Heat(Ladle) Analysis, P:Product Analysis *7-2:X100, 3:X1000
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

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.
N. J. Baek

