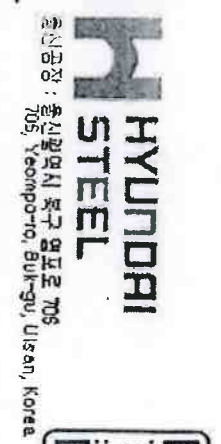


CERTIFICATE NO.(증서번호) : C001623
 DATE OF ISSUE(발행일자) : 2019-12-05
 CONTRACT(PO) NO.(계약번호) : 28891
 PR NO.(주문서번호) : F191000108
 COMMAND(주문명) : E RW CARBON STEEL PIPE
 SPECIFICATION(제표규격) : ASTM A53 B

Page | 1 of 1
 CUSTOMER(고객사) : EN 10204 TYPE 3.1 - 2004
 원대중합상사(주)

검사증명서

MILL TEST CERTIFICATE



| No | TYPE OF PIPE END | SIZE OUT-DIA*THICK*LENGTH (외경*두께*길이) | PCS | WEIGHT (KG) | TOTAL LENGTH (M) | HEAT NO. | Hydraulic Test | | | Tensile Properties(Cover Length: 2 pcs) | | | Hardness Test | | CMI Impact Test | | DWT Test (C) | |
|-------|------------------|--|-----|----------------|---------------------|----------|-----------------|-------------|-----|---|------|----------------|---------------|----|-----------------|----|--------------|----|
| | | | | | | | Pressure MPa | Time Min | Max | Tensile Strength Base | Weld | Yield Strength | Y/R Rate | EL | #1 | #2 | | #3 |
| 1 | EB BE | 10" X 0.500" X 6.150 M | 10 | 5.013 | 61.5 | PG9806 | 1950 | 5 | T | 483 | 534 | 449 | | | | | | |
| 2 | EB BE | 10" X 0.500" X 6.150 M | 49 | 24.555 | 301.35 | SC05405 | 1950 | 5 | T | 490 | 532 | 347 | | | | | | |
| TOTAL | | | 59 | 29.579 | 362.85 | | | | | | | | | | | | | |

| No | Heat No. | Chemical Composition(%) | | | | | | | | | | | Zn-Coating Test | | | HC-Test | | HLC Test | | | REMARK | | | | |
|----|----------|-------------------------|----|----|-----|----|----|----|----|-----|-----|------|-----------------|------------|----------------------|---------|--------|-------------------|-----|-----|--------|-----|-----|--|--|
| | | C | S | Mn | P | S | Cu | NI | Cr | Mo | V | CAI | #10 | Zn Coating | Coating Surface Test | Time | Result | Collapse Pressure | psi | CJR | | CTR | CSR | | |
| 1 | PG9806 | Max | 30 | | 120 | 50 | 45 | 40 | 40 | 40 | 150 | 90 | 1000 | | | | | | | | | | | | |
| | | H | 6 | 1 | 79 | 14 | 4 | | | | | | | | | | | | | | | | | | |
| | | P | 6 | 2 | 81 | 14 | TR | 3 | 1 | 2 | 14 | 2 | 78 | | | | | | | | | | | | |
| | | P | 6 | 2 | 81 | 14 | TR | 3 | 1 | 2 | 14 | 2 | 79 | | | | | | | | | | | | |
| 2 | SC05405 | Max | 30 | | 120 | 50 | 45 | 40 | 40 | 150 | 90 | 1000 | | | | | | | | | | | | | |
| | | H | 6 | 1 | 79 | 14 | 4 | | | | | | | | | | | | | | | | | | |
| | | P | 6 | 2 | 81 | 14 | TR | 3 | 1 | 2 | 14 | 2 | 79 | | | | | | | | | | | | |
| | | P | 6 | 2 | 81 | 14 | TR | 3 | 1 | 2 | 14 | 2 | 79 | | | | | | | | | | | | |

Heat Treatment: Non-Destructive Test (NDT) GOOD
 Bending Test: GOOD
 Vessel & Direction: GOOD

SUBJECT: The material has been manufactured, sampled, tested and inspected in accordance with the specification and has been found to meet the requirements.
 -본 검사증명서에 영가된 규격용도의 사용시 안전성 문제가 발생할 수 있으며, 검사증명서 위변조시 본회사 무조건 불이익을 입힐 수 있습니다.

* 본 검사증명서는 원본인 전자문서(영자서형 정보 포함)로부터 출력된 시범입니다. 전자문서와 내용은 원대제철 고객포털에서 확인하실 수 있습니다. (http://sm.hyundai-steel.com/csr/020n.jsb)
 * This Mill Test Certificate is a copy that has been printed from original electronic document(with digital stamp).
 You are able to check an original electronic document at Hyundai's customer portal. (http://sm.hyundai-steel.com/csr/020n.jsb) * QRcode scanner App : QRnet

CA Manager: H.K. CHOI