

CERTIFICATE NO.(성적서 번호) : AC07763 Page 2 of 2
 DATE OF ISSUE(발행일자) : 2016-12-24
 CONTRACT(P/O) NO.(계약번호) : 24409
 PR NO.(주문서번호) : F161000176
 COMMODITY(제품명) : ERW/HFI CARBON STEEL PIPE
 SPECIFICATION(제품규격) : API 5L B PSL1/ASTM A53B/ASME SA53B

검사증명서

MILL TEST CERTIFICATE

EN10204 3.1/ISO 10474 3.1B



CUSTOMER(고객사): PLESA ANAHUAC Y CIAS S.A. DE C.V.

| No. | TYPE OF PIPE END ※1 | SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이) | PCS (본) | WEIGHT (KG) | TOTAL LENGTH (F) | HEAT No. | Hydrostatic Test | | Spec. ※2 | Tensile Properties(Gage Length : 2 inch) | | | | | Hardness Test | | Hardness Test & CVN Impact Test | | | | | D.W.T Test(°C) | | | |
|-----|------------------------|--|------------|----------------|---------------------|----------|------------------|------|-------------|--|------|----------------|----------|-------------|-------------------|------------------------|---------------------------------|---|-----|---------------|---|----------------|--|--|--|
| | | | | | | | Pressure | Time | | Tensile Strength | | Yield Strength | Y/R Rate | E.L | Max. Value | CVN Impact Test(°C) | | | | Shear Area(%) | | | | | |
| | | | | | | | | | | Base | Weld | | | | | Absorbed Energy(Joule) | | | | | | | | | |
| | | | | | | | PSI | SEC | | Mpa | Mpa | Mpa | % | % | ※3 | 1 | 2 | 3 | avg | 1 | 2 | avg | | | |
| 5 | EB BE | 14" X 0.500" X 20.177 F | 29 | 19,151 | 585.133 | 6851401 | 1520 | 5 | T | 472 | 497 | 349 | 46 | B H W | 169 161 147 | | | | | | | | | | |
| 6 | EB BE | 18" X 0.375" X 20.177 F | 43 | 27,729 | 867.611 | SP71673 | 890 | 5 | T | 529 | 513 | 412 | 40 | B H W | 132 147 148 | | | | | | | | | | |
| | | TOTAL | 305 | 138,203 | 6,153.985 | | | | | | | | | | | | | | | | | | | | |

| No. | Heat No. | Spec. ※4 | Chemical Composition(%) 2:×100 3:×1000 4:×10000 | | | | | | | | | | | | | | Zn-Coating Test | | HC-Test | H.I.C Test | | | S.S.C Test | Remark | |
|-----|----------|-------------|--|------|----------|------|------|------|------|------|------|------|------|------|------|-----------|-----------------|------------|---------------------|--------------------|-----|-----|------------|--------|-----|
| | | | C | Si | Mn ※7 | P | S | Cu | Ni | Cr | Mo | V | Ti | Nb | B | CM1 ※8 | CM2 ※9 | Zn Coating | Copper Sulfate Test | Collapsee Pressure | CLR | CTR | | | CSR |
| | | | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | Time | Result | psi | % | % | | | % |
| | | | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | | | | | | | | |
| 5 | 6851401 | H | 15 | 1 | 71 | 26 | 2 | | | | | | | | | | | | | | | | | | |
| | | P | 15 | 1 | 72 | 23 | 5 | 2 | 2 | 3 | TR | TR | TR | TR | 1 | TR | TR | | | | | | | | |
| 6 | SP71673 | H | 7 | 19 | 100 | 16 | 2 | | | | | | | | | | | | | | | | | | |
| | | P | 7 | 18 | 99 | 14 | 4 | 2 | 2 | 3 | TR | TR | TR | 2 | 2 | 2 | 2 | | | | | | | | |
| | | P | 7 | 18 | 98 | 14 | 4 | 2 | 2 | 3 | TR | TR | TR | 1 | 2 | 2 | 2 | | | | | | | | |

| | | | | | | | |
|----------------|----------------------------|---------------------------|--------------------|----------------------------|--|--|--|
| Heat Treatment | Non-Destructive Test (U.T) | Flattening / Bending Test | Visual & Dimension | Residual Magnetism (Gauss) | | | |
| GOOD | GOOD | GOOD | GOOD | GOOD | | | |

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H.K. CHOI

QA Manager

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