# 검 사 증 명 서
## MILL TEST CERTIFICATE

HYUNDAI STEEL

당진제철소 : 충남 당진시 송악읍 북부산업로 1480
1480 Bukbusanup-Ro, Songak-Eup, Dangjin-Si, Chungnam, Korea

주문번호 Order No. : F190700141

품 명 Commodity : HOT ROLLED CARBON STEEL PLATE

고객사 Customer :

증명서 번호 Certificate No. : 20190731-PS-009-040

제품규격 Specification : ASTM A572-50/A709-50

주문자 Contractor : HYUNDAI CORPORATION

발행일자 Date of Issue : 2019-08-06

| 제품치수 Dimension | 수량 Quantity | 중량 Weight (Kg) | 제강번호 Heat No. | 제품번호 Product No. | Position | 인장시험 Tensile Test YP | TS | EL | YP-EL | RA | YR | YP Mtd | Division | 화학성분 Chemical Composition(%) 단위 Unit 2:x100 3:x1,000 4:x10,000 5:x100,000 C | Si | Mn | P | S | Cr | Ni | Cu | Mo | Nb | Ti | V | Sol-Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (N/mm²) | | (%) | (%) | (%) | (%) | | | 4 | 3 | 3 | 4 | 4 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19841 | FC11830701→ | T | 418.5 | 567.1 | 26 | | | | U | L | 1,658 | 355 | 1,331 | 156 | 38 | 3 | 8 | 86 | 0 | 21 | 2 | 17 | 26 |
| | | | | | | | | | | | | | P | 1,689 | 350 | 1,340 | 152 | 33 | 3 | 8 | 90 | 0 | 20 | 2 | 18 | 28 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19841 | FC11830702 | T | 418.5 | 567.1 | 26 | | | | U | L | 1,658 | 355 | 1,331 | 156 | 38 | 3 | 8 | 86 | 0 | 21 | 2 | 17 | 26 |
| | | | | | | | | | | | | | P | 1,689 | 350 | 1,340 | 152 | 33 | 3 | 8 | 90 | 0 | 20 | 2 | 18 | 28 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19841 | FC11830703 | T | 418.5 | 567.1 | 26 | | | | U | L | 1,658 | 355 | 1,331 | 156 | 38 | 3 | 8 | 86 | 0 | 21 | 2 | 17 | 26 |
| | | | | | | | | | | | | | P | 1,689 | 350 | 1,340 | 152 | 33 | 3 | 8 | 90 | 0 | 20 | 2 | 18 | 28 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19834 | FC11830802→ | T | 386.2 | 563.8 | 27 | | | | U | L | 1,655 | 364 | 1,364 | 138 | 46 | 3 | 8 | 88 | 0 | 21 | 2 | 17 | 35 |
| | | | | | | | | | | | | | P | 1,706 | 361 | 1,375 | 136 | 46 | 3 | 8 | 91 | 0 | 20 | 2 | 18 | 36 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19838 | FC11831102→ | T | 365.3 | 545.9 | 26 | | | | U | L | 1,616 | 353 | 1,352 | 150 | 38 | 3 | 8 | 90 | 0 | 20 | 2 | 16 | 31 |
| | | | | | | | | | | | | | P | 1,680 | 344 | 1,343 | 140 | 35 | 3 | 8 | 94 | 0 | 19 | 2 | 17 | 29 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19841 | FC11831202 | T | 389.9 | 560.6 | 26 | | | | U | L | 1,658 | 355 | 1,331 | 156 | 38 | 3 | 8 | 86 | 0 | 21 | 2 | 17 | 26 |
| | | | | | | | | | | | | | P | 1,689 | 350 | 1,340 | 152 | 33 | 3 | 8 | 90 | 0 | 20 | 2 | 18 | 28 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19838 | FC11831302→ | T | 365.3 | 545.9 | 26 | | | | U | L | 1,616 | 353 | 1,352 | 150 | 38 | 3 | 8 | 90 | 0 | 20 | 2 | 16 | 31 |
| | | | | | | | | | | | | | P | 1,680 | 344 | 1,343 | 140 | 35 | 3 | 8 | 94 | 0 | 19 | 2 | 17 | 29 |
| 38.1 x 2438 x 6096 | 1 | 4,445 | R19841 | FC11831501 | T | 389.9 | 560.6 | 26 | | | | U | L | 1,658 | 355 | 1,331 | 156 | 38 | 3 | 8 | 86 | 0 | 21 | 2 | 17 | 26 |
| | | | | | | | | | | | | | P | 1,689 | 350 | 1,340 | 152 | 33 | 3 | 8 | 90 | 0 | 20 | 2 | 18 | 28 |

NOTE

* Position - T:Top, M:Middle, B:Bottom
* Tensile test - Direction:Transverse, Gauge length:200mm (Rectangular), YP Mtd : 2 (0.2% off-set),5 (0.5% underload), U (Upper yield point), L (Lower yield point)
* Division - P:Product analysis, L:Ladle analysis

* The plate is fully killed and fine grained steel. Basic oxygen process and Vacuum degassing process were applied.* This Mill Test Certificate is issued in accordance with EN 10204 Type 3.1

상기의 제품은 검사의 결과 지정된 규격에 합격한 것을 증명합니다.
WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS

Signature S. B. Park
Chief Of Quality Assurance Team


* 본 검사증명서는 완벽한 전자문서(전자서명 정보 포함)로부터 출력된 사본입니다. 전자문서의 내용은 현대제철 고객포탈에서 확인하실 수 있습니다.(http://sm.hyundai-steel.com/cs/cm/login.jsp)
* This Mill Test Certificate is a copy that has been printed from original electronic document(with digital signing).
You are able to check an original electronic document at hyundaisteel's customer portal.( http://sm.hyundai-steel.com/cs/cm/login.jsp) * QRcode scanner App : 'QReal'
* [사용상 주의사항] 본 검사증명서에 명기된 규격 외 사용시 제품손상 및 안전상 문제가 발생할 수 있습니다.
* [Caution for Use] Damage on products and safety problems may arise if used other than to the spec stated in this Mill Test Certification.