

Order No. : 01S3829535

PO No. : 01S3829535

Supplier : HANWHA CORPORATION

Commodity : PLATE

Customer : DUFERCO S.A.

Spec & Type : EN10025-2 S355J2+N

Q7903-19-VT-04 - 30mm

GR 44762(36)

ONIRAM, LDA

 DEP. QUALIDADE
RECEPÇÃO

QY 170-20-VT-07-25mm

| Size | Product No. | Quantity | Weight (kg) | Heat No. | Position | Tensile Test | | | Impact Test | Division | Chemical Composition | | | | | | | | | | | | | |
|--|-----------------|----------|-------------|----------|----------|--------------|----------|--------|--------------------------------------|----------|---|----------------|----------------|------------------|------------------|----------------|----------------|---------|----------------|----------------|----------|----------------|------------------|----------------|
| | | | | | | YP (MPa) | TS (MPa) | EL (%) | V Notch -20°C Energy (Joule) | | C (%) | Si (%) | Mn (%) | P (%) | S (%) | Cr (%) | Ni (%) | B (ppm) | Cu (%) | Mo (%) | N (ppm) | Nb (%) | Ti (%) | V (%) |
| 25x2500x12000 | PP33223901-3904 | 4 | 23,544 | SU36130 | T | 413 | 529 | 31 | 1: 267 2: 267 3: 276 A: 270 | L P | 0.1552 0.1559 | 0.338 0.337 | 1.390 1.390 | 0.0090 0.0089 | 0.0023 0.0022 | 0.015 0.016 | 0.007 0.007 | 2 2 | 0.014 0.012 | 0.001 0.001 | 24 29 | 0.022 0.022 | 0.0129 0.0127 | 0.002 0.002 |
| *** Sub Total (310) *** | | 10 | 58,860 (kg) | | | | | | | | | | | | | | | | | | | | | |
| *** Heat Treatment ==> Normalizing rolling *** | | | | | | | | | | | CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5 | | | | | | | | | | | | | |
| 30x2000x12000 | PP33225401 | 1 | 5,652 | SU36130 | T | 399 | 536 | 30 | 1: 241 2: 233 3: 243 A: 239 | L P | 0.1552 0.1559 | 0.338 0.337 | 1.390 1.390 | 0.0090 0.0089 | 0.0023 0.0022 | 0.015 0.016 | 0.007 0.007 | 2 2 | 0.014 0.012 | 0.001 0.001 | 24 29 | 0.022 0.022 | 0.0129 0.0127 | 0.002 0.002 |
| 30x2000x12000 | PP33282701-2704 | 4 | 22,608 | SU36131 | T | 422 | 537 | 29 | 1: 252 2: 230 3: 246 A: 243 | L P | 0.1503 0.1510 | 0.354 0.348 | 1.392 1.380 | 0.0084 0.0089 | 0.0018 0.0019 | 0.016 0.015 | 0.006 0.007 | 1 2 | 0.013 0.012 | 0.004 0.003 | 28 28 | 0.025 0.024 | 0.0113 0.0117 | 0.002 0.002 |
| *** Sub Total (320) *** | | 5 | 28,260 (kg) | | | | | | | | | | | | | | | | | | | | | |
| *** Heat Treatment ==> Normalizing rolling *** | | | | | | | | | | | CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5 | | | | | | | | | | | | | |
| 30x2500x8000 | PP33225301-5304 | 4 | 18,840 | SU35855 | T | 414 | 544 | 27 | 1: 260 2: 268 3: 264 A: 264 | L P | 0.1525 0.1529 | 0.344 0.346 | 1.396 1.400 | 0.0088 0.0101 | 0.0030 0.0017 | 0.018 0.018 | 0.010 0.009 | 3 1 | 0.028 0.019 | 0.002 0.002 | 42 33 | 0.025 0.024 | 0.0135 0.0124 | 0.002 0.002 |
| 30x2500x8000 | PP33378801-8803 | 3 | 14,130 | SU35855 | T | 414 | 544 | 27 | 1: 268 2: 270 3: 255 A: 264 | L P | 0.1525 0.1529 | 0.344 0.346 | 1.396 1.400 | 0.0088 0.0101 | 0.0030 0.0017 | 0.018 0.018 | 0.010 0.009 | 3 1 | 0.028 0.019 | 0.002 0.002 | 42 33 | 0.025 0.024 | 0.0135 0.0124 | 0.002 0.002 |

* Position - T : Top, M : Middle, B : Bottom
 * Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
 * Impact Test. Direction : Surface Longitudinal, Full-Size : 10mmX10mm
 * Division - L : Ladle Analysis, P : Products Analysis
 * Supply Condition : As-Rolled unless otherwise Heat Treated.

FAF - Produtos Siderurgicos, S.A.
Departamento de Qualidade

We hereby certify that the material herein has been made in accordance with the order and above specification. This material has been fully killed and made by basic oxygen process. This material is fine grained steel. This material has been made by vacuum degassing process. No repair welding was performed to the products. Test Certificate is issued according to EN10204 3.1. Melted and Manufactured in Republic of Korea

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 0038/CPR/MUM/1210003/1 Surveyor To :

Ko Jae Gon

Order No. : 01S3829535

PO No. : 01S3829535

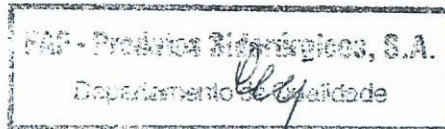
Supplier : HANWHA CORPORATION

Commodity : PLATE

Customer : DUFERCO S.A.

Spec & Type : EN10025-2 S355J2+N

| Product No. | Division | Sol-Al (%) | CEQ (%) | | |
|-------------------------|----------|----------------|---------|----|---|
| PP33223901-3904 | L P | 0.030 0.027 | 0.39 | | |
| *** Sub Total (310) *** | | | | 10 | 58,860 (kg) |
| | | | | | CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5 |
| PP33225401 | L P | 0.030 0.027 | 0.39 | | |
| PP33282701-2704 | L P | 0.031 0.031 | 0.39 | | |
| *** Sub Total (320) *** | | | | 5 | 28,260 (kg) |
| | | | | | CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5 |
| PP33225301-5304 | L P | 0.031 0.025 | 0.39 | | |
| PP33378801-8803 | L P | 0.031 0.025 | 0.39 | | |



We hereby certify that the material herein has been made in accordance with the order and above specification. This material has been fully killed and made by basic oxygen process. This material is fine grained steel. This material has been made by vacuum degassing process. No repair welding was performed to the products. Test Certificate is issued according to EN10204 3.1. Melted and Manufactured in Republic of Korea

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CE 0038/CPR/MUM/1210003/1 Surveyor To :

Ko Jae Gom