


**ArcelorMittal Europe – Long Products**

CARRETERA MADRID - IRUN, KM. 417  
20212 OLABERRIA (Gipuzkoa)  
TELEF. (943) 80.50.00 - FAX (943) 88.04.04


**MILL TEST CERTIFICATE**
**OLA P-68806**

| DISCHARGE ADDRESS   |                    | CUSTOMER  |                   |
|---|--------------------|---|-------------------|
| Plesa Anahuac Y Cias, S.A. de C.V.<br>Av. Valle de las Alamedas 66-O<br>Col. S. Francisco Chilpan, Tul<br>MEXICO                        |                    | PLESA ANAHUAC Y CIAS S.A. DE C.V.<br>AV. VALLE DE LAS ALAMEDAS 66-O<br>COL. SAN FRANCISCO CHILPAN - T<br>MEXICO |                   |
| SHIPPED AND CERTIFIED BY  |                    | CREDIT NUMBER   | PORT OF LOADING   |
| ARCELORMITTAL OLABERRIA<br>CARRETERA MADRID - IRUN, KM. 417<br>20212 OLABERRIA (Gipuzkoa)<br>TELEF. (943) 80.50.00 - FAX (943) 88.04.04 |                    |   | PASAJES, SPAIN    |
|   |                    | PORT OF DISCHARGE   | VESSEL            |
|   |                    | VERACRUZ  | CONDOR VALPARAISO |
| OUR REFERENCE   | CONTRACT NUMBER    | ORDER NUMBER  | DATE              |
| P1704510  | E-73057/1700029804 | 29890   | 17/07/2020        |

Material: "WF-PERFILES DE ACERO AL CARBONO LAMINADO EN CALIENTE"

El exportador de los productos incluidos en el presente documento, Autorización aduanera no.:

ARCELORMITTAL OLABERRIA-BERGARA, S.L.U. ES/20/0040/03

Declara que, salvo indicación en sentido contrario, estos productos gozan de un origen preferencial ESPAÑA

| SIZE           | LENGTH | BUNDLES | PIECES BUNDLES | TOTAL PIECES | WEIGHT BUNDLES | TOTAL WEIGHT | HEAT   |
|----------------|--------|---------|----------------|--------------|----------------|--------------|--------|
| <b>+ /RED</b>  |        |         |                |              |                |              |        |
| WF BEAMS 10x26 | 40'    | 1       | 10             | 10           | 4717           | 4.717        | 196265 |
| WF BEAMS 12x14 | 40'    | 10      | 20             | 200          | 5079           | 50.790       | 197664 |
| WF BEAMS 12x14 | 40'    | 5       | 20             | 100          | 5079           | 25.395       | 197665 |
| WF BEAMS 12x14 | 40'    | 1       | 20             | 20           | 5079           | 5.079        | 197667 |
| WF BEAMS 12x16 | 40'    | 3       | 18             | 54           | 5225           | 15.675       | 197666 |
| WF BEAMS 12x16 | 40'    | 3       | 18             | 54           | 5225           | 15.675       | 197667 |
| WF BEAMS 12x19 | 40'    | 4       | 14             | 56           | 4827           | 19.308       | 197659 |
| WF BEAMS 12x26 | 40'    | 1       | 10             | 10           | 4717           | 4.717        | 196728 |
| WF BEAMS 12x26 | 40'    | 1       | 10             | 10           | 4717           | 4.717        | 196731 |
| WF BEAMS 12x26 | 40'    | 14      | 10             | 140          | 4717           | 66.038       | 197664 |
| WF BEAMS 12x26 | 40'    | 11      | 10             | 110          | 4717           | 51.887       | 197665 |
| WF BEAMS 12x30 | 40'    | 5       | 8              | 40           | 4355           | 21.775       | 197657 |
| WF BEAMS 12x30 | 40'    | 3       | 8              | 24           | 4355           | 13.065       | 197658 |
| WF BEAMS 12x30 | 40'    | 6       | 8              | 48           | 4355           | 26.130       | 197659 |
| WF BEAMS 12x35 | 40'    | 1       | 8              | 8            | 5081           | 5.081        | 196717 |
| WF BEAMS 12x35 | 40'    | 10      | 8              | 80           | 5081           | 50.810       | 197655 |
| WF BEAMS 12x35 | 40'    | 1       | 8              | 8            | 5081           | 5.081        | 197656 |
| WF BEAMS 12x50 | 40'    | 2       | 5              | 10           | 4536           | 9.072        | 196760 |
| WF BEAMS 12x50 | 40'    | 4       | 5              | 20           | 4536           | 18.144       | 197992 |
| WF BEAMS 12x50 | 40'    | 2       | 5              | 10           | 4536           | 9.072        | 197994 |


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**OLA P-68806**

| SIZE           | LENGTH | BUNDLES | PIECES BUNDLES | TOTAL PIECES | WEIGHT BUNDLES | TOTAL WEIGHT | HEAT   |
|----------------|--------|---------|----------------|--------------|----------------|--------------|--------|
| WF BEAMS 12x50 | 40´    | 1       | 5              | 5            | 4536           | 4.536        | 197995 |
| WF BEAMS 12x50 | 40´    | 4       | 5              | 20           | 4536           | 18.144       | 197997 |
| WF BEAMS 12x50 | 40´    | 1       | 4              | 4            | 3629           | 3.629        | 196759 |
| WF BEAMS 14x26 | 40´    | 2       | 9              | 18           | 4245           | 8.490        | 197625 |
| WF BEAMS 14x34 | 40´    | 1       | 6              | 6            | 3701           | 3.701        | 196327 |
| WF BEAMS 14x34 | 40´    | 1       | 6              | 6            | 3701           | 3.701        | 196328 |
| WF BEAMS 14x34 | 40´    | 1       | 5              | 5            | 3085           | 3.085        | 196327 |
| WF BEAMS 16x26 | 40´    | 1       | 7              | 7            | 3302           | 3.302        | 197462 |
| WF BEAMS 16x26 | 40´    | 2       | 7              | 14           | 3302           | 6.604        | 198051 |
| WF BEAMS 16x26 | 40´    | 3       | 7              | 21           | 3302           | 9.906        | 198052 |
| WF BEAMS 16x26 | 40´    | 6       | 7              | 42           | 3302           | 19.812       | 198102 |
| WF BEAMS 16x31 | 40´    | 5       | 7              | 35           | 3937           | 19.685       | 198036 |
| WF BEAMS 16x36 | 40´    | 1       | 5              | 5            | 3266           | 3.266        | 197489 |
| WF BEAMS 16x40 | 40´    | 1       | 6              | 6            | 4355           | 4.355        | 197019 |
| WF BEAMS 16x40 | 40´    | 1       | 6              | 6            | 4355           | 4.355        | 197020 |
| WF BEAMS 16x40 | 40´    | 2       | 6              | 12           | 4355           | 8.710        | 197483 |
| WF BEAMS 16x50 | 40´    | 1       | 5              | 5            | 4536           | 4.536        | 197004 |
| WF BEAMS 16x50 | 40´    | 1       | 5              | 5            | 4536           | 4.536        | 197476 |
| WF BEAMS 18x46 | 40´    | 4       | 6              | 24           | 5008           | 20.032       | 198090 |
| WF BEAMS 18x50 | 40´    | 6       | 5              | 30           | 4536           | 27.216       | 198214 |
| WF BEAMS 18x50 | 40´    | 2       | 5              | 10           | 4536           | 9.072        | 198215 |
| WF BEAMS 18x50 | 40´    | 3       | 5              | 15           | 4536           | 13.608       | 198216 |
| WF BEAMS 18x55 | 40´    | 4       | 5              | 20           | 4990           | 19.960       | 198228 |
| WF BEAMS 18x60 | 40´    | 3       | 4              | 12           | 4354           | 13.062       | 197032 |
| WF BEAMS 18x60 | 40´    | 9       | 4              | 36           | 4354           | 39.186       | 198221 |
| WF BEAMS 18x60 | 40´    | 2       | 4              | 8            | 4354           | 8.708        | 198222 |
| WF BEAMS 18x65 | 40´    | 3       | 4              | 12           | 4717           | 14.151       | 197603 |
| WF BEAMS 18x65 | 40´    | 1       | 4              | 4            | 4717           | 4.717        | 198220 |
| WF BEAMS 12x65 | 40´    | 1       | 3              | 3            | 3538           | 3.538        | 198006 |
| WF BEAMS 12x65 | 40´    | 4       | 3              | 12           | 3538           | 14.152       | 198008 |
| WF BEAMS 12x65 | 40´    | 1       | 3              | 3            | 3538           | 3.538        | 198009 |
| WF BEAMS 21x62 | 40´    | 1       | 4              | 4            | 4500           | 4.500        | 196898 |
| WF BEAMS 21x62 | 40´    | 4       | 4              | 16           | 4500           | 18.000       | 198053 |
| WF BEAMS 21x62 | 40´    | 1       | 4              | 4            | 4500           | 4.500        | 198054 |
| WF BEAMS 21x68 | 40´    | 2       | 4              | 8            | 4935           | 9.870        | 196911 |
| WF BEAMS 21x68 | 40´    | 2       | 4              | 8            | 4935           | 9.870        | 198065 |
| WF BEAMS 24x55 | 40´    | 2       | 5              | 10           | 4990           | 9.980        | 198054 |


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**OLA P-68806**

| SIZE           | LENGTH | BUNDLES | PIECES BUNDLES | TOTAL PIECES | WEIGHT BUNDLES | TOTAL WEIGHT | HEAT   |
|----------------|--------|---------|----------------|--------------|----------------|--------------|--------|
| WF BEAMS 24x55 | 40´    | 10      | 5              | 50           | 4990           | 49.900       | 198055 |
| WF BEAMS 24x55 | 40´    | 6       | 5              | 30           | 4990           | 29.940       | 198066 |
| WF BEAMS 24x62 | 40´    | 1       | 4              | 4            | 4500           | 4.500        | 196844 |
| WF BEAMS 24x62 | 40´    | 6       | 4              | 24           | 4500           | 27.000       | 198073 |
| WF BEAMS 24x68 | 40´    | 5       | 4              | 20           | 4935           | 24.675       | 196063 |
| WF BEAMS 24x68 | 40´    | 2       | 4              | 8            | 4935           | 9.870        | 196882 |
| WF BEAMS 24x68 | 40´    | 1       | 4              | 4            | 4935           | 4.935        | 196884 |
| WF BEAMS 24x84 | 40´    | 4       | 3              | 12           | 4572           | 18.288       | 198034 |
| WF BEAMS 24x84 | 40´    | 9       | 3              | 27           | 4572           | 41.148       | 198035 |

 TOTAL BUNDLES **222**

 TOTAL WEIGHT **1.014.497 Kg.**

A02 EN 10204/3.1

**CSA G40.21 50W/ASTM A572 G50/A992/A6-16a**

 (B01/B02/B03) A03  
 OLAP68806



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## MILL TEST CERTIFICATE

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| COLADA<br>HEAT | COMPOSICION QUIMICA (%)<br>CHEMICAL COMPOSITION (%) |       |      |      |      |      |      |      |      |      |      |      |      |     |  |  |  |  |
|----------------|---|-------|------|------|------|------|------|------|------|------|------|------|------|-----|--|--|--|--|
|                | C   | Mn    | Si   | P    | S    | V    | Cr   | Ni   | Mo   | Cu   | Nb   | Sn   | Al   | CEV |  |  |  |  |
| 196063         | ,068  | ,980  | ,180 | ,023 | ,018 | ,005 | ,110 | ,180 | ,037 | ,470 | ,034 | ,024 | ,001 | ,31 |  |  |  |  |
| 196265         | ,086  | ,890  | ,180 | ,027 | ,019 | ,006 | ,220 | ,150 | ,037 | ,400 | ,035 | ,023 | ,003 | ,32 |  |  |  |  |
| 196327         | ,083  | ,940  | ,210 | ,020 | ,025 | ,005 | ,160 | ,180 | ,038 | ,480 | ,035 | ,026 | ,002 | ,32 |  |  |  |  |
| 196328         | ,078  | ,900  | ,200 | ,025 | ,024 | ,005 | ,160 | ,190 | ,036 | ,450 | ,032 | ,029 | ,002 | ,31 |  |  |  |  |
| 196717         | ,079  | ,880  | ,200 | ,016 | ,019 | ,004 | ,120 | ,240 | ,069 | ,370 | ,030 | ,026 | ,004 | ,30 |  |  |  |  |
| 196728         | ,087  | ,940  | ,220 | ,023 | ,019 | ,006 | ,210 | ,230 | ,055 | ,420 | ,036 | ,027 | ,004 | ,34 |  |  |  |  |
| 196731         | ,094  | ,900  | ,200 | ,021 | ,019 | ,005 | ,160 | ,230 | ,049 | ,410 | ,033 | ,035 | ,004 | ,33 |  |  |  |  |
| 196759         | ,081  | ,940  | ,210 | ,021 | ,023 | ,006 | ,130 | ,240 | ,060 | ,390 | ,037 | ,040 | ,005 | ,32 |  |  |  |  |
| 196760         | ,070  | ,920  | ,210 | ,018 | ,023 | ,005 | ,110 | ,230 | ,058 | ,410 | ,035 | ,039 | ,004 | ,30 |  |  |  |  |
| 196844         | ,086  | ,880  | ,200 | ,020 | ,024 | ,006 | ,190 | ,250 | ,058 | ,370 | ,034 | ,027 | ,005 | ,32 |  |  |  |  |
| 196882         | ,099  | ,890  | ,210 | ,023 | ,024 | ,006 | ,140 | ,250 | ,052 | ,390 | ,035 | ,028 | ,003 | ,33 |  |  |  |  |
| 196884         | ,092  | ,940  | ,230 | ,021 | ,023 | ,005 | ,150 | ,200 | ,043 | ,370 | ,036 | ,027 | ,005 | ,33 |  |  |  |  |
| 196898         | ,095  | ,950  | ,200 | ,023 | ,022 | ,005 | ,230 | ,230 | ,055 | ,470 | ,037 | ,021 | ,003 | ,36 |  |  |  |  |
| 196911         | ,081  | ,980  | ,190 | ,023 | ,019 | ,007 | ,200 | ,170 | ,033 | ,500 | ,034 | ,025 | ,003 | ,34 |  |  |  |  |
| 197004         | ,079  | ,900  | ,190 | ,022 | ,019 | ,005 | ,150 | ,180 | ,050 | ,320 | ,032 | ,024 | ,004 | ,30 |  |  |  |  |
| 197019         | ,065  | ,940  | ,170 | ,021 | ,020 | ,005 | ,140 | ,170 | ,049 | ,420 | ,033 | ,024 | ,001 | ,30 |  |  |  |  |
| 197020         | ,077  | ,890  | ,160 | ,025 | ,019 | ,004 | ,230 | ,220 | ,069 | ,450 | ,031 | ,034 | ,001 | ,33 |  |  |  |  |
| 197032         | ,091  | ,910  | ,200 | ,015 | ,025 | ,004 | ,100 | ,240 | ,053 | ,370 | ,031 | ,028 | ,005 | ,31 |  |  |  |  |
| 197462         | ,078  | ,950  | ,190 | ,032 | ,024 | ,006 | ,200 | ,140 | ,029 | ,430 | ,037 | ,025 | ,003 | ,32 |  |  |  |  |
| 197476         | ,064  | ,950  | ,190 | ,024 | ,027 | ,005 | ,130 | ,150 | ,032 | ,400 | ,036 | ,022 | ,002 | ,29 |  |  |  |  |
| 197483         | ,087  | 1,010 | ,200 | ,023 | ,023 | ,006 | ,200 | ,170 | ,033 | ,410 | ,036 | ,026 | ,003 | ,34 |  |  |  |  |
| 197489         | ,081  | ,910  | ,180 | ,021 | ,023 | ,005 | ,110 | ,140 | ,022 | ,380 | ,035 | ,027 | ,003 | ,29 |  |  |  |  |
| 197603         | ,075  | ,920  | ,190 | ,028 | ,025 | ,005 | ,120 | ,150 | ,025 | ,450 | ,034 | ,026 | ,003 | ,30 |  |  |  |  |
| 197625         | ,103  | ,880  | ,160 | ,022 | ,018 | ,005 | ,080 | ,130 | ,018 | ,300 | ,034 | ,025 | ,003 | ,30 |  |  |  |  |
| 197655         | ,082  | ,930  | ,180 | ,019 | ,019 | ,006 | ,160 | ,140 | ,036 | ,370 | ,033 | ,022 | ,002 | ,31 |  |  |  |  |
| 197656         | ,097  | ,940  | ,190 | ,022 | ,019 | ,005 | ,190 | ,190 | ,042 | ,380 | ,035 | ,022 | ,003 | ,34 |  |  |  |  |
| 197657         | ,101  | ,970  | ,190 | ,022 | ,018 | ,006 | ,180 | ,190 | ,046 | ,370 | ,036 | ,021 | ,001 | ,35 |  |  |  |  |
| 197658         | ,088  | ,930  | ,200 | ,020 | ,019 | ,005 | ,180 | ,210 | ,045 | ,340 | ,032 | ,023 | ,002 | ,33 |  |  |  |  |
| 197659         | ,085  | ,970  | ,200 | ,019 | ,022 | ,006 | ,170 | ,190 | ,040 | ,300 | ,032 | ,025 | ,003 | ,32 |  |  |  |  |
| 197664         | ,099  | ,940  | ,210 | ,019 | ,023 | ,005 | ,120 | ,200 | ,035 | ,430 | ,038 | ,025 | ,003 | ,33 |  |  |  |  |
| 197665         | ,070  | ,950  | ,200 | ,024 | ,022 | ,004 | ,170 | ,190 | ,036 | ,430 | ,035 | ,025 | ,003 | ,31 |  |  |  |  |
| 197666         | ,073  | ,980  | ,180 | ,023 | ,022 | ,005 | ,190 | ,210 | ,033 | ,470 | ,035 | ,026 | ,001 | ,33 |  |  |  |  |
| 197667         | ,081  | ,960  | ,230 | ,024 | ,023 | ,005 | ,180 | ,200 | ,038 | ,510 | ,034 | ,028 | ,004 | ,33 |  |  |  |  |
| 197992         | ,067  | ,920  | ,200 | ,027 | ,023 | ,005 | ,160 | ,150 | ,027 | ,370 | ,032 | ,026 | ,005 | ,29 |  |  |  |  |
| 197994         | ,060  | ,940  | ,210 | ,025 | ,023 | ,006 | ,160 | ,140 | ,026 | ,350 | ,034 | ,027 | ,027 | ,29 |  |  |  |  |
| 197995         | ,072  | ,910  | ,210 | ,023 | ,023 | ,005 | ,120 | ,160 | ,023 | ,330 | ,032 | ,029 | ,004 | ,29 |  |  |  |  |
| 197997         | ,110  | ,930  | ,220 | ,023 | ,020 | ,006 | ,130 | ,170 | ,026 | ,370 | ,034 | ,023 | ,004 | ,33 |  |  |  |  |
| 198006         | ,080  | ,880  | ,190 | ,026 | ,022 | ,005 | ,100 | ,180 | ,028 | ,370 | ,033 | ,023 | ,003 | ,29 |  |  |  |  |
| 198008         | ,076  | ,930  | ,180 | ,020 | ,023 | ,006 | ,090 | ,160 | ,026 | ,370 | ,050 | ,034 | ,002 | ,29 |  |  |  |  |
| 198009         | ,087  | ,850  | ,220 | ,019 | ,022 | ,005 | ,100 | ,150 | ,028 | ,370 | ,039 | ,038 | ,005 | ,29 |  |  |  |  |
| 198034         | ,075  | ,900  | ,200 | ,018 | ,023 | ,005 | ,120 | ,130 | ,030 | ,300 | ,032 | ,024 | ,002 | ,28 |  |  |  |  |
| 198035         | ,087  | ,890  | ,220 | ,019 | ,021 | ,004 | ,100 | ,150 | ,029 | ,320 | ,030 | ,025 | ,004 | ,29 |  |  |  |  |
| 198036         | ,072  | ,940  | ,190 | ,020 | ,022 | ,006 | ,110 | ,170 | ,033 | ,350 | ,035 | ,025 | ,002 | ,29 |  |  |  |  |
| 198051         | ,067  | ,940  | ,200 | ,025 | ,020 | ,006 | ,190 | ,170 | ,059 | ,390 | ,032 | ,023 | ,003 | ,31 |  |  |  |  |
| 198052         | ,079  | ,900  | ,210 | ,022 | ,021 | ,006 | ,160 | ,160 | ,044 | ,370 | ,030 | ,025 | ,005 | ,31 |  |  |  |  |
| 198053         | ,069  | ,930  | ,190 | ,019 | ,021 | ,008 | ,120 | ,140 | ,054 | ,380 | ,032 | ,026 | ,002 | ,30 |  |  |  |  |
| 198054         | ,068  | ,930  | ,190 | ,022 | ,023 | ,007 | ,120 | ,140 | ,041 | ,380 | ,034 | ,025 | ,001 | ,29 |  |  |  |  |
| 198055         | ,059  | ,980  | ,210 | ,021 | ,022 | ,007 | ,110 | ,070 | ,020 | ,380 | ,035 | ,022 | ,004 | ,28 |  |  |  |  |


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**OLA P-68806**

| COLADA<br>HEAT | COMPOSICION QUIMICA (%)<br>CHEMICAL COMPOSITION (%) |      |      |      |      |      |      |      |      |      |      |      |      |     |  |  |  |  |  |
|----------------|---|------|------|------|------|------|------|------|------|------|------|------|------|-----|--|--|--|--|--|
|                | C   | Mn   | Si   | P    | S    | V    | Cr   | Ni   | Mo   | Cu   | Nb   | Sn   | Al   | CEV |  |  |  |  |  |
| <i>B08</i>     |   |      |      |      |      |      |      |      |      |      |      |      |      |     |  |  |  |  |  |
| 198065         | ,067  | ,940 | ,190 | ,019 | ,025 | ,006 | ,100 | ,140 | ,027 | ,410 | ,032 | ,041 | ,001 | ,29 |  |  |  |  |  |
| 198066         | ,065  | ,930 | ,200 | ,018 | ,023 | ,005 | ,080 | ,130 | ,015 | ,410 | ,035 | ,041 | ,003 | ,28 |  |  |  |  |  |
| 198073         | ,077  | ,920 | ,210 | ,018 | ,021 | ,005 | ,090 | ,140 | ,030 | ,400 | ,032 | ,025 | ,002 | ,29 |  |  |  |  |  |
| 198090         | ,064  | ,950 | ,190 | ,025 | ,022 | ,006 | ,180 | ,160 | ,025 | ,430 | ,035 | ,030 | ,003 | ,30 |  |  |  |  |  |
| 198102         | ,073  | ,930 | ,180 | ,028 | ,022 | ,006 | ,120 | ,180 | ,035 | ,390 | ,034 | ,025 | ,001 | ,30 |  |  |  |  |  |
| 198214         | ,085  | ,930 | ,200 | ,021 | ,020 | ,005 | ,130 | ,140 | ,031 | ,370 | ,032 | ,026 | ,003 | ,31 |  |  |  |  |  |
| 198215         | ,076  | ,900 | ,210 | ,020 | ,020 | ,005 | ,120 | ,140 | ,031 | ,340 | ,032 | ,023 | ,004 | ,29 |  |  |  |  |  |
| 198216         | ,086  | ,940 | ,200 | ,021 | ,020 | ,005 | ,120 | ,140 | ,030 | ,350 | ,033 | ,027 | ,004 | ,31 |  |  |  |  |  |
| 198220         | ,079  | ,880 | ,200 | ,021 | ,023 | ,004 | ,140 | ,240 | ,050 | ,430 | ,031 | ,027 | ,003 | ,31 |  |  |  |  |  |
| 198221         | ,101  | ,890 | ,220 | ,021 | ,023 | ,003 | ,130 | ,250 | ,054 | ,430 | ,031 | ,026 | ,002 | ,33 |  |  |  |  |  |
| 198222         | ,109  | ,950 | ,220 | ,021 | ,020 | ,006 | ,120 | ,190 | ,043 | ,410 | ,038 | ,029 | ,001 | ,34 |  |  |  |  |  |
| 198228         | ,080  | ,940 | ,220 | ,024 | ,022 | ,006 | ,120 | ,190 | ,037 | ,440 | ,036 | ,029 | ,004 | ,31 |  |  |  |  |  |

| MATERIAL<br>SIZE | COLADA<br>HEAT | PROPIEDADES MECANICAS<br>MECHANICAL PROPERTIES |     |            |     |             |      |
|------------------|----------------|--|-----|------------|-----|-------------|------|
|                  |                | ReH<br>MPa                                     |     | Rm<br>MPa  |     | A%<br>L0=8" |      |
| <i>B11</i>       | <i>B08</i>     | <i>C11</i>                                     |     | <i>C12</i> |     | <i>C13</i>  |      |
| W-10x26          | 196265         | 411  | 407 | 549        | 543 | 22,8        | 22,6 |
| W-12x14          | 197664         | 451  | 441 | 558        | 536 | 22,2        | 22,1 |
| W-12x14          | 197665         | 445  | 431 | 562        | 550 | 22,6        | 21,8 |
| W-12x14          | 197667         | 449  | 440 | 534        | 546 | 24,9        | 22,9 |
| W-12x16          | 197666         | 422  | 410 | 547        | 545 | 22,4        | 22,4 |
| W-12x16          | 197667         | 396  | 386 | 539        | 521 | 22,6        | 22,  |
| W-12x19          | 197659         | 430  | 416 | 534        | 534 | 22,8        | 22,2 |
| W-12x26          | 196728         | 418  | 412 | 559        | 557 | 23,6        | 23,5 |
| W-12x26          | 196731         | 427  | 416 | 554        | 538 | 23,6        | 22,7 |
| W-12x26          | 197664         | 418  | 407 | 537        | 524 | 23,7        | 23,4 |
| W-12x26          | 197665         | 411  | 401 | 553        | 537 | 23,8        | 23,3 |
| W-12x30          | 197657         | 417  | 401 | 561        | 545 | 24,5        | 23,8 |
| W-12x30          | 197658         | 418  | 418 | 537        | 537 | 23,7        | 23,5 |
| W-12x30          | 197659         | 407  | 396 | 505        | 495 | 23,7        | 23,2 |
| W-12x35          | 196717         | 373  | 371 | 494        | 491 | 24,3        | 24,3 |
| W-12x35          | 197655         | 400  | 391 | 531        | 511 | 24,5        | 24,1 |
| W-12x35          | 197656         | 407  | 401 | 562        | 536 | 23,9        | 23,9 |
| W-12x50          | 196759         | 398  | 394 | 522        | 507 | 24,8        | 24,3 |
| W-12x50          | 196760         | 401  | 399 | 531        | 512 | 24,6        | 24,1 |
| W-12x50          | 197992         | 401  | 395 | 529        | 511 | 24,9        | 24,2 |
| W-12x50          | 197994         | 382  | 377 | 496        | 489 | 24,9        | 24,3 |
| W-12x50          | 197995         | 374  | 374 | 491        | 491 | 24,7        | 24,5 |
| W-12x50          | 197997         | 386  | 376 | 503        | 493 | 24,1        | 24,  |
| W-12x65          | 198006         | 419  | 400 | 504        | 479 | 25,3        | 25,3 |
| W-12x65          | 198008         | 402  | 398 | 513        | 491 | 25,4        | 24,4 |
| W-12x65          | 198009         | 406  | 390 | 509        | 493 | 24,7        | 24,6 |
| W-14x26          | 197625         | 425  | 413 | 513        | 505 | 23,2        | 22,7 |
| W-14x34          | 196327         | 409  | 405 | 534        | 524 | 24,3        | 23,4 |
| W-14x34          | 196328         | 423  | 407 | 533        | 523 | 23,9        | 23,2 |
| W-16x26          | 197462         | 458  | 441 | 549        | 539 | 24,5        | 23,7 |
| W-16x26          | 198051         | 447  | 430 | 532        | 514 | 25,6        | 25,  |
| W-16x26          | 198052         | 437  | 433 | 525        | 523 | 25,         | 24,7 |


**ArcelorMittal Europe – Long Products**

 CARRETERA MADRID - IRUN, KM. 417  
 20212 OLABERRIA (Gipuzkoa)  
 TELEF. (943) 80.50.00 - FAX (943) 88.04.04

**MILL TEST CERTIFICATE**
**OLA P-68806**

| MATERIAL<br>SIZE | COLADA<br>HEAT | PROPIEDADES MECANICAS<br>MECHANICAL PROPERTIES |     |           |     |             |      |
|------------------|----------------|--|-----|-----------|-----|-------------|------|
|                  |                | ReH<br>MPa                                     |     | Rm<br>MPa |     | A%<br>L0=8" |      |
| B11              | B08            | C11  |     | C12       |     | C13         |      |
| W-16x26          | 198102         | 440  | 425 | 529       | 517 | 25,7        | 25,3 |
| W-16x31          | 198036         | 421  | 419 | 514       | 502 | 25,         | 24,9 |
| W-16x36          | 197489         | 437  | 437 | 552       | 489 | 25,2        | 23,8 |
| W-16x40          | 197019         | 420  | 410 | 535       | 517 | 24,4        | 23,6 |
| W-16x40          | 197020         | 419  | 411 | 535       | 518 | 23,8        | 23,3 |
| W-16x40          | 197483         | 410  | 393 | 512       | 512 | 23,4        | 22,6 |
| W-16x50          | 197004         | 379  | 380 | 506       | 498 | 24,5        | 24,5 |
| W-16x50          | 197476         | 395  | 389 | 517       | 497 | 23,7        | 23,5 |
| W-18x46          | 198090         | 405  | 403 | 512       | 500 | 25,1        | 24,3 |
| W-18x50          | 198214         | 398  | 384 | 515       | 493 | 24,5        | 23,9 |
| W-18x50          | 198215         | 386  | 384 | 502       | 482 | 24,9        | 24,2 |
| W-18x50          | 198216         | 393  | 382 | 510       | 492 | 24,3        | 24,1 |
| W-18x55          | 198228         | 416  | 420 | 523       | 520 | 23,4        | 24,5 |
| W-18x60          | 197032         | 403  | 399 | 507       | 501 | 23,9        | 23,5 |
| W-18x60          | 198221         | 399  | 391 | 495       | 495 | 24,4        | 24,1 |
| W-18x60          | 198222         | 400  | 396 | 537       | 515 | 26,1        | 25,2 |
| W-18x65          | 197603         | 377  | 368 | 486       | 498 | 23,1        | 23,1 |
| W-18x65          | 198220         | 400  | 392 | 513       | 499 | 26,         | 25,3 |
| W-21x62          | 196898         | 426  | 410 | 532       | 530 | 24,8        | 24,3 |
| W-21x62          | 198053         | 406  | 398 | 519       | 503 | 25,7        | 24,7 |
| W-21x62          | 198054         | 403  | 392 | 502       | 480 | 25,5        | 24,8 |
| W-21x68          | 196911         | 396  | 388 | 512       | 490 | 23,6        | 23,6 |
| W-21x68          | 198065         | 383  | 369 | 499       | 483 | 25,4        | 25,  |
| W-24x55          | 198054         | 391  | 375 | 498       | 496 | 24,8        | 24,7 |
| W-24x55          | 198055         | 410  | 404 | 513       | 503 | 26,6        | 25,8 |
| W-24x55          | 198066         | 402  | 400 | 502       | 488 | 25,2        | 24,7 |
| W-24x62          | 196844         | 414  | 398 | 516       | 502 | 24,3        | 24,1 |
| W-24x62          | 198073         | 403  | 397 | 498       | 484 | 24,8        | 24,8 |
| W-24x68          | 196063         | 409  | 396 | 512       | 498 | 25,9        | 25,7 |
| W-24x68          | 196882         | 426  | 412 | 533       | 513 | 24,8        | 24,4 |
| W-24x68          | 196884         | 407  | 393 | 522       | 508 | 24,7        | 24,2 |
| W-24x84          | 198034         | 387  | 381 | 493       | 491 | 25,9        | 25,1 |
| W-24x84          | 198035         | 383  | 379 | 498       | 496 | 25,7        | 25,7 |

**60 análisis**

 D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.  
 B06: Marca AMO

 Responsable del Departamento de Calidad Z01  
**ArcelorMittal Olaberria-Bergara**

Jose Maria Galindo