

|                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                      | <b>CERTIFICADO DE PRODUCTO</b>                                                                                                                                                                                                                                                     |                                                                                                                                                      | <b>Cliente:</b><br><b>GREEN OIL SERVICES SA</b> |
| <b>ARBROS S.A.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>VÁLVULAS DE SEGURIDAD Y ALIVIO</b>                                                                                                                                                                                                                                              |                                                                                                                                                      | <b>O.C.I.: 22659</b><br><b>10/11/2023</b>       |
| <b>GENERALIDADES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  | Orden de compra:<br>Remito de entrega:                                                                                                                                                                                                                                             | 27798<br>0001-00017096                                                                                                                               |                                                 |
| <b>DATOS DE PLACA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 | Línea de Producto:<br>Nro de Serie:<br>TAG:<br>Medida (Ent x Sal):<br>Clase (Ent x Sal):<br>Orif. API 526 / Area:<br>Presión de Apertura (Bar):<br>Contrapresión:<br>Presión de aju en Banco (Bar):<br>Fluido:<br>Temperatura (°C):<br>Código de Resorte:<br>Código de la válvula: | 1700<br>61350<br><br>1x1<br>NPT(M)XNPT(H)<br>D<br>68.7<br>0<br>68.7<br>HC + AGUA DE FORMACION + PRODUCTOS QUIMICOS<br><br>1186-19<br>1725D9M9HSM1226 |                                                 |
| <b>CONTROL DIMENSIONAL</b>                                                                                                                                                                                                                                                                                                                                                                                                                            | ANSI B-16.5 (Ent-Sal)<br>Roscas (Ent-Sal)<br>API 526                                                                                                                                                                                                                               | -<br>Aprobado<br>-                                                                                                                                   |                                                 |
| <b>PRUEBA HIDRAULICA Y MATERIALES</b>                                                                                                                                                                                                                                                                                                                                                                                                                 | Material Disco<br>Identificación Disco                                                                                                                                                                                                                                             | 17-4-PH<br>S25465                                                                                                                                    |                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Material Tobera<br>Identificación Tobera                                                                                                                                                                                                                                           | 17-4-PH<br>S25465                                                                                                                                    |                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Material Cuerpo<br>Identificación Cuerpo<br>Presión de PH (Bar)                                                                                                                                                                                                                    | AISI-316<br>CD207<br>150                                                                                                                             |                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Material Bonete<br>Identificación Bonete<br>Presión de PH (Bar)                                                                                                                                                                                                                    | AISI-316<br>SV6176<br>150                                                                                                                            |                                                 |
| <b>ENSAYOS OPERACIONALES EN BANCO HIDRONEUMÁTICO - FLUIDO AIRE A TEMP. AMBIENTE</b>                                                                                                                                                                                                                                                                                                                                                                   | Calibracion a la presión segun ASME PTC-25.3:<br>Ensayos de repetitividad (3):<br>Control estanqueidad de asientos segun API 527:                                                                                                                                                  |                                                                                                                                                      | Satisfactorio<br>Satisfactorio<br>Satisfactorio |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Patrón Utilizado:                                                                                                                                                                                                                                                                  |                                                                                                                                                      | C-94220                                         |
| <b>RESULTADO</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Satisfactorio</b>                                                                                                                                                                                                                                                               |                                                                                                                                                      |                                                 |
| <b>FIRMA INSPECTOR AERRE</b>                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                 | Ing. Iris Mónica Rabboni<br>Nº en OPDS s/res 1126: 188<br>Matrícula: 47642                                                                           |                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Parque Industrial Desarrollo Productivo Ruta 24 5801, Moreno, Provincia de Buenos Aires</b>                                                                                                                                                                                     |                                                                                                                                                      |                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PRECINTO                                                                                                                                                                                                                                                                           |                                                                                                                                                      |                                                 |
| <b>GARANTIA:</b><br>Los productos están garantizados por el término de 12 meses a partir de la salida de fábrica, contra todo defecto de materiales y / o fabricación, limitada a la reposición sin cargo en nuestra fábrica de un elemento similar. Esta garantía no ampara el desgaste anormal por la utilización en condiciones distintas a las especificadas<br><br>Se recomienda efectuar un mantenimiento periódico para extender su vida útil. |                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |                                                 |



# INSPECTION CERTIFICATE



Certificate Type : EN 10204/3.1

Our Sales Order No. OA-MN-FR-2122-00447  
Customer Order No. 5000007937  
Customer FAMIQ S R L  
Av. San Martin 4723  
C.A Buenos Aires C1417DSH Argentina

Invoice No. EXP/BSR/2223/020  
Invoice Date 13/04/2022  
Certificate No. TC177459  
Date 13/04/2022

Trade Mark



Inspector's Mark :



| Material Details |                        | Stainless Steel Round Bar H 1025 Centerless Ground & Polished |           |                 |                 |
|------------------|------------------------|---------------------------------------------------------------|-----------|-----------------|-----------------|
| Steel Grade      | 17-4PH/630             | Shape                                                         | Round Bar | Size            | 25.40 mm        |
| Heat No.         | S-25465                | Tolerance                                                     | h 9       | Length Of Bars  | 6.00-6.10 mtr   |
| Net Weight       | 0.925 MT               | Number Of Bars                                                | 39        | Melting Process | EF - AOD - MEMS |
| Bundle Nos       | RO22-07678             |                                                               |           |                 |                 |
| Requirements     | ASTM A 564/A 564M:2019 |                                                               |           |                 |                 |

## Chemical Analysis %

| Element | C      | Si     | Mn     | P      | S      | Cr      | Ni     | Cu     | Ti     | Nb     | Ta     |
|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| Min     |        |        |        |        |        | 15.0000 | 3.0000 | 3.0000 |        | 0.1500 |        |
| Max     | 0.0700 | 1.0000 | 1.0000 | 0.0400 | 0.0300 | 17.5000 | 5.0000 | 5.0000 |        | 0.4500 |        |
| Melt    | 0.0420 | 0.4600 | 0.6800 | 0.0320 | 0.0040 | 15.2300 | 4.5900 | 3.2500 | 0.0060 | 0.2750 | 0.0035 |

## Mechanical Properties

| Mechanical Properties |                                            |                                   |                                       |                                     |                                      | Charpy Impact V Notch (Longitudinal)<br>(Joules) |        |        |        |       |
|-----------------------|--------------------------------------------|-----------------------------------|---------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------------------|--------|--------|--------|-------|
|                       | YS/(Rp 0.2%)<br>(N/mm2)<br>ASTM A 370:2016 | UTS<br>(N/mm2)<br>ASTM A 370:2016 | % Elongation<br>4D<br>ASTM A 370:2016 | % Reduction Area<br>ASTM A 370:2016 | Hardness<br>(BHN)<br>ASTM A 370:2016 |                                                  |        |        |        |       |
| Min.                  | 1000.00                                    | 1070.00                           | 12.00                                 | 45.00                               | 331.00                               | Temp .Deg<br><br>(C)                             | Result |        |        |       |
| Max.                  |                                            |                                   |                                       |                                     |                                      |                                                  | 1      | 2      | 3      | Avg.  |
| Results               | 1098.38                                    | 1144.35                           | 19.58                                 | 55.66                               | 370.00                               | R.Temp                                           | 92.00  | 102.00 | 100.00 | 98.00 |

## Heat Treatment :

Solution Annealing @ 1900 F, Soaking for 1"/hr , Oil quench to below 90 F  
Ageing @ 1025° F, Soaking for 4 hrs, air cooled to below 90 F

## Remarks

- \* Country Of Origin Of Goods - India
- \* Free from Radioactivity - verified through Gamma Ray Spectrometer
- \* No Mercury contamination
- \* Micro & Macro Test - Satisfactory
- \* No welding has been performed on the material
- \* Heat Treatment furnace calibrated as per API 6A Appendix-M
- \* Specimen Size for UTS - 12.50 mm / 0.50 inch dia.
- \* Specimen Size for Charpy Impact V Notch test - 55x10x10 mm dia.
- \* Visual & Dimensional Inspection - OK
- \* Ultrasonic Test:ASTM A 388:2016 OK



We confirm that the material is manufactured & supplied in accordance to the Purchase Order

Ambica Steels Limited

QA Head/NDT Inspector  
AMBICA STEELS LIMITED

Regd. Office : C-54/1 Wazirpur Industrial Area, New Delhi 110052, India. Works:: 51/2, Site IV, Sahibabad Industrial Area, Ghaziabad, 201010, UP  
Works : Plot No.32, Site II, Loni Road Industrial Area, Ghaziabad, 201007, UP. Ph:91-120-41893000, Fax: 91-120-418399

CERTIFICADO DE ENSAYO METALURGICO  
METALLURGY TEST CERTIFICATE

FECHA CERTIFICADO: 10/05/2023

|                        |                                               |                                             |
|------------------------|-----------------------------------------------|---------------------------------------------|
| CLIENTE<br>ARBROS S.A. | ORDEN DEL CLIENTE N<br>PURCHASE ORDER N 14821 | ORDEN DE FABRICA N<br>INTERNAL ORDER N 7659 |
|------------------------|-----------------------------------------------|---------------------------------------------|

|                                    |                                                                                                                                                                                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOMBRE DE LA PIEZA<br>NAME OF PART | CPO VS 2800 1"X2" M-11417 (CFBM) / TOBERA VALV. SEGURIDAD M-14030 - CFBM / BONETE VAL. SEG. 2800 1" X 2" MOD. 13082 (CFBM) / BONETE V.S. 11504 CFBM / CPO VS 2800 1"X2" M-11417 (CFBM) / BONETE V.S. 1" X 2" O 1 1/2" X 3" M - 11026 (CFBM) / |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                      |                  |
|----------------------|------------------|
| MATERIAL<br>MATERIAL | ASTM A351 CFBM.- |
|----------------------|------------------|

| ANALISIS QUIMICO<br>(SEGUN IQ 030) | COLADA<br>HEAT N° | ANALISIS N°<br>ANALYSIS N° | ELEMENTOS (PESO %)<br>ELEMENT (WEIGHT %) |       |       |       |       |        |       |        |       |       |       |
|------------------------------------|-------------------|----------------------------|------------------------------------------|-------|-------|-------|-------|--------|-------|--------|-------|-------|-------|
|                                    |                   |                            | C                                        | Si    | Mn    | P     | S     | Cr     | Mo    | Ni     | V     | Cu    | CEQ   |
|                                    | SV-6176           |                            | 0.066                                    | 1.050 | 1.240 | 0.013 | 0.011 | 18.931 | 2.220 | 10.170 | 0.078 | 0.314 | 0.000 |
|                                    |                   |                            | Ti                                       | Pb    | W     | B     | Nb    |        |       |        |       |       |       |
|                                    |                   |                            | 0.007                                    | 0.002 | 0.033 | 0.006 | 0.019 |        |       |        |       |       |       |

| ENSAYO DE TRACCION<br>TENSILE TEST | COLADA<br>HEAT N° | ENSAYO N°<br>TEST N° | RESISTENCIA A LA<br>TRACCION | LIMITE ELASTICO | ALARGAMIENTO<br>ELONGATION | ESTRICCION<br>REDUCTION | ENSAYO N°<br>TEST N° | DUREZA BRINNEL         |                 |
|------------------------------------|-------------------|----------------------|------------------------------|-----------------|----------------------------|-------------------------|----------------------|------------------------|-----------------|
|                                    |                   |                      |                              |                 |                            |                         |                      | BOLILLA /<br>BAL 10 MM | CARGA /<br>LOAD |
|                                    |                   |                      | (MPa)                        | (MPa)           | 50 MM (2 IN.)              | %                       |                      | PROBETA /<br>CUPON     | PIEZA /<br>PART |
|                                    | SV-6176           | 20886                | 556.065                      | 426.049         | 55.906                     | .000                    |                      |                        |                 |
|                                    |                   |                      |                              |                 |                            |                         |                      |                        |                 |

|                                      |                   |
|--------------------------------------|-------------------|
| DIMENSIONES DE QTC<br>QCT DIMENSIONS | ASTM A-703 (2008) |
|--------------------------------------|-------------------|

|                                       |                                  |
|---------------------------------------|----------------------------------|
| INSPECCION VISUAL<br>VISUL INSPECTION | MSS SP 112 (2010) Y SP 55 (2011) |
|---------------------------------------|----------------------------------|

|                                  |              |
|----------------------------------|--------------|
| CALIBRACION DEL<br>ESPECTOMETRO: | SEGUN IQ 030 |
|----------------------------------|--------------|

|                          |                 |
|--------------------------|-----------------|
| OBSERVACIONES<br>REMARKS | CERTIFICADO 2/2 |
|--------------------------|-----------------|

|                                       |
|---------------------------------------|
| TRATAMIENTO TERMICO<br>HEAT TREATMENT |
|---------------------------------------|

|             |         |       |      |
|-------------|---------|-------|------|
| HIPERTEMPLE | 1080 °C | 2 Hrs | AGUA |
| NORMALISED  | °C      | Hrs   |      |
| REVENIDO    | °C      | Hrs   |      |
| TEMPERED    | °C      | Hrs   |      |

ARIEL BARET  
REALIZOM. CAPISANO  
APROBÓ

FECHA CERTIFICADO: 10/05/2023

|                        |                                               |                                             |
|------------------------|-----------------------------------------------|---------------------------------------------|
| CLIENTE<br>ARBROS S.A. | ORDEN DEL CLIENTE N<br>PURCHASE ORDER N 14819 | ORDEN DE FABRICA N<br>INTERNAL ORDER N 7680 |
|------------------------|-----------------------------------------------|---------------------------------------------|

NOMBRE DE LA PIEZA  
NAME OF PART

BONETE 1800 1/2" X 3/4" M - 11489 (CF8M) / TOBERA PARA VALV. DE SEG.MODELO: 13879 3K4 (CF8M) / BONETE V.S. M - 16463 (CF8M) / TOBERA PARA VALV. DE SEG.MODELO: 13879 3K4 (CF8M) / CAPUCHON 2800 1X2 A 11/2X3 MOD-11031 (CF8M) / TOBERA VALVULA 2800 MOD. 1354

MATERIAL  
MATERIAL

ASTM A351 CF8M.-

| ANALISIS QUIMICO<br>(SEGUN IQ 030) | COLADA<br>HEAT N° | ANALISIS N°<br>ANALYSIS N° | ELEMENTOS (PESO %)<br>ELEMENT (WEIGHT %) |       |       |       |       |        |       |        |       |       |       |  |
|------------------------------------|-------------------|----------------------------|------------------------------------------|-------|-------|-------|-------|--------|-------|--------|-------|-------|-------|--|
|                                    |                   |                            | C                                        | Si    | Mn    | P     | S     | Cr     | Mo    | Ni     | V     | Cu    | CEQ   |  |
|                                    | SV-6176           |                            | 0.066                                    | 1.050 | 1.240 | 0.013 | 0.011 | 18.931 | 2.220 | 10.170 | 0.078 | 0.314 | 0.000 |  |
|                                    |                   |                            | Ti                                       | Pb    | W     | B     | Nb    |        |       |        |       |       |       |  |
|                                    |                   |                            | 0.007                                    | 0.002 | 0.033 | 0.006 | 0.019 |        |       |        |       |       |       |  |

| ENSAYO DE TRACCION<br>TENSILE TEST | COLADA<br>HEAT N° | ENSAYO N°<br>TEST N° | RESISTENCIA A LA<br>TRACCION | LIMITE ELASTICO | ALARGAMIENTO<br>ELONGATION | ESTRICCION<br>REDUCTION | ENSAYO N°<br>TEST N° | DUREZA BRINNEL         |                 |
|------------------------------------|-------------------|----------------------|------------------------------|-----------------|----------------------------|-------------------------|----------------------|------------------------|-----------------|
|                                    |                   |                      |                              |                 |                            |                         |                      | BOLILLA /<br>BAL 10 MM | CARGA /<br>LOAD |
|                                    |                   |                      | (MPa)                        | (MPa)           | 50 MM (2 IN.)              | %                       |                      | PROBETA /<br>CUPON     | PIEZA /<br>PART |
|                                    | SV-6176           | 20886                | 556.065                      | 426.049         | 55.906                     | .000                    |                      |                        |                 |
|                                    |                   |                      |                              |                 |                            |                         |                      |                        |                 |

| DIMENSIONES DE QTC<br>QCT DIMENSIONS  |                                  | TRATAMIENTO TERMICO<br>HEAT TRATAMIENT |         |       |      |
|---------------------------------------|----------------------------------|----------------------------------------|---------|-------|------|
| ASTM A-703 (2008)                     |                                  |                                        |         |       |      |
| INSPECCION VISUAL<br>VISUL INSPECTION | MSS SP 112 (2010) Y SP 55 (2011) | HIPERTEMPLE                            | 1080 °C | 2 Hrs | AGUA |
| CALIBRACION DEL<br>ESPECTOMETRO:      |                                  | NORMALISED                             | °C      | Hrs   |      |
| OBSERVACIONES<br>REMARKS              | CERTIFICADO 1/2                  | REVENIDO                               | °C      | Hrs   |      |
|                                       |                                  | TEMPERED                               | °C      | Hrs   |      |

ARIEL BARET  
REALIZO

M. CAPISANO  
APROBÓ



# INSPECTION CERTIFICATE



Certificate Type : EN 10204/3.1

Our Sales Order No. OA-MN-FR-2122-00447  
Customer Order No. 5000007937  
Customer FAMIQ S R L  
Av. San Martin 4723  
C.A Buenos Aires C1417DSH Argentina

Invoice No. EXP/BSR/2223/020  
Invoice Date 13/04/2022  
Certificate No. TC177459  
Date 13/04/2022

Trade Mark



Inspector's Mark :



| Material Details |                        | Stainless Steel Round Bar H 1025 Centerless Ground & Polished |           |                 |                 |
|------------------|------------------------|---------------------------------------------------------------|-----------|-----------------|-----------------|
| Steel Grade      | 17-4PH/630             | Shape                                                         | Round Bar | Size            | 25.40 mm        |
| Heat No.         | S-25465                | Tolerance                                                     | h 9       | Length Of Bars  | 6.00-6.10 mtr   |
| Net Weight       | 0.925 MT               | Number Of Bars                                                | 39        | Melting Process | EF - AOD - MEMS |
| Bundle Nos       | RO22-07678             |                                                               |           |                 |                 |
| Requirements     | ASTM A 564/A 564M:2019 |                                                               |           |                 |                 |

## Chemical Analysis %

| Element | C      | Si     | Mn     | P      | S      | Cr      | Ni     | Cu     | Ti     | Nb     | Ta     |
|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| Min     |        |        |        |        |        | 15.0000 | 3.0000 | 3.0000 |        | 0.1500 |        |
| Max     | 0.0700 | 1.0000 | 1.0000 | 0.0400 | 0.0300 | 17.5000 | 5.0000 | 5.0000 |        | 0.4500 |        |
| Melt    | 0.0420 | 0.4600 | 0.6800 | 0.0320 | 0.0040 | 15.2300 | 4.5900 | 3.2500 | 0.0060 | 0.2750 | 0.0035 |

## Mechanical Properties

| Mechanical Properties |                                            |                                   |                                       |                                     |                                      | Charpy Impact V Notch (Longitudinal)<br>(Joules) |        |        |        |       |
|-----------------------|--------------------------------------------|-----------------------------------|---------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------------------|--------|--------|--------|-------|
|                       | YS/(Rp 0.2%)<br>(N/mm2)<br>ASTM A 370:2016 | UTS<br>(N/mm2)<br>ASTM A 370:2016 | % Elongation<br>4D<br>ASTM A 370:2016 | % Reduction Area<br>ASTM A 370:2016 | Hardness<br>(BHN)<br>ASTM A 370:2016 |                                                  |        |        |        |       |
| Min.                  | 1000.00                                    | 1070.00                           | 12.00                                 | 45.00                               | 331.00                               | Temp .Deg<br><br>(C)                             | Result |        |        |       |
| Max.                  |                                            |                                   |                                       |                                     |                                      |                                                  | 1      | 2      | 3      | Avg.  |
| Results               | 1098.38                                    | 1144.35                           | 19.58                                 | 55.66                               | 370.00                               | R.Temp                                           | 92.00  | 102.00 | 100.00 | 98.00 |

## Heat Treatment :

Solution Annealing @ 1900 F, Soaking for 1"/hr , Oil quench to below 90 F  
Ageing @ 1025° F, Soaking for 4 hrs, air cooled to below 90 F

## Remarks

- \* Country Of Origin Of Goods - India
- \* Free from Radioactivity - verified through Gamma Ray Spectrometer
- \* No Mercury contamination
- \* Micro & Macro Test - Satisfactory
- \* No welding has been performed on the material
- \* Heat Treatment furnace calibrated as per API 6A Appendix-M
- \* Specimen Size for UTS - 12.50 mm / 0.50 inch dia.
- \* Specimen Size for Charpy Impact V Notch test - 55x10x10 mm dia.
- \* Visual & Dimensional Inspection - OK
- \* Ultrasonic Test:ASTM A 388:2016 OK

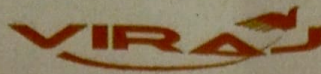


We confirm that the material is manufactured & supplied in accordance to the Purchase Order

**Ambica Steels Limited**

QA Head/NDT Inspector  
**AMBICA STEELS LIMITED**

Regd. Office : C-54/1 Wazirpur Industrial Area, New Delhi 110052, India. Works:: 51/2, Site IV, Sahibabad Industrial Area, Ghaziabad, 201010, UP  
Works : Plot No.32, Site II, Loni Road Industrial Area, Ghaziabad, 201007, UP. Ph:91-120-41893000, Fax: 91-120-418399



VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(SRM Division)  
Works: SURVEY NO.- 25/1, 25/2, 26 & 34, Village- MAAN, Taluka- PALGHAR, Dist.- PALGHAR, MAHARASHTRA -401 506, INDIA,  
e-mail- vielqc@viraj.com

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT ( DIN EN 10204-3.1)

|                                                                                                              |                                                                                   |                   |             |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------|-------------|
| (A06)CUSTOMER :<br>FAMIQ SRL<br>AV. SAN MARTIN 4723 C.P. (1417)<br>CAPITALFEDERAL,<br>ARGENTINA<br>Argentina | Manufacturer's                                                                    | (A03)MTR NO.      | 910007139/3 |
|                                                                                                              | Symbol (A04)                                                                      | (Z02) DATE        | 20.05.2022  |
|                                                                                                              |  | MATERIAL SPEC.    |             |
|                                                                                                              |                                                                                   | (B02) GRADE       | AISI 316L   |
|                                                                                                              |                                                                                   | DIMENSIONAL SPEC. | h9          |

(B01) : STAINLESS STEEL BRIGHT BARS

(B04) DELIVERY CONDITION : PEELED & POLISHED

Approved acc. To AD 2000-Merkblatt W0 and  
certified acc. To PED (2014/68/EU) by Certification  
Body for Pressure Equipment of TUVNORD System ( Notified body,reg.no:0045 )

(A07)ORDER NO: 5000008031

(A09)Article No: 301191

| (B09-B11)ITEM DESCRIPTION | LENGTH      | (B08) PIECES(Nos) | NET WEIGHT(TO) | (B07) HEAT NO |
|---------------------------|-------------|-------------------|----------------|---------------|
| ROUND 50.800 MM           | 6.00 - 6.20 | 22                | 2.161          | CD207         |

Bundle No 14000116340,14000116339,14000116338

(C71-C92) CHEMICAL ANALYSIS

| ELEMENT | %C     | %Mn    | %Si    | %S     | %P     | %Cr     | %Ni     | %Cu    | %Mo    | %Ti    | %Co    | %N     |  |  |  |  |
|---------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|--|--|--|--|
| HEAT    | 0.0150 | 1.5200 | 0.4300 | 0.0220 | 0.0310 | 16.8400 | 10.0500 | 0.3200 | 2.0500 | 0.0250 | 0.1500 | 0.0800 |  |  |  |  |

MECHANICAL PROPERTIES

| INSPECTION NO. | TEST SPECIFICATION (ISO 6892-1) |                     |                        |             |  |                    |  |          |  |  |  |  |  |  |  |  |
|----------------|---------------------------------|---------------------|------------------------|-------------|--|--------------------|--|----------|--|--|--|--|--|--|--|--|
|                |                                 | (C03) TEST TEMP @RT | (C02) TEST DIRECTION L |             |  |                    |  |          |  |  |  |  |  |  |  |  |
| 890000444808   | (C12)                           | Proof Strength      |                        | (C13)       |  | Reduction of Area% |  | Hardness |  |  |  |  |  |  |  |  |
|                | Tensile Strength                | Rp=0.2%             | Rp = 1%                | Elongation% |  |                    |  |          |  |  |  |  |  |  |  |  |
|                | MPA                             | MPA                 | MPA                    | Lo=4D       |  |                    |  | HBW      |  |  |  |  |  |  |  |  |
|                | 634.00                          | 332.00              |                        | 54.00       |  | 71.00              |  | 185      |  |  |  |  |  |  |  |  |

METALLURGICAL PROPERTIES

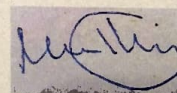
| (B03)COROSION TEST                                | MICRO OBSERVATION                                     |  |
|---------------------------------------------------|-------------------------------------------------------|--|
| PASSED IGC TEST PER ASTM-A262 & DIN EN ISO 3651-2 | NO CARBIDE PRECIPITATION OBSERVED ON GRAIN BOUNDARIES |  |

(B06)PRODUCT MARKING : SIZE, GRADE, HEAT NO., LOGO & INSPECTOR STAMP

MATERIAL CONFIRMS TO ASTM A276/A276M-17 COND A.  
INTERGRANULAR CORROSION TEST SATISFACTORY AS PER ASTM A262-15 PRACTICE E.  
CERTIFIED AS PER EN 10204-3.1.

REMARKS : MINIMUM SOLUTION ANNEALING TEMPRATURE 1050 C, SOAKING TIME 01 HR/INCH WATER QUENCHED..  
MATERIAL IS FREE FROM MERCURY CONTAMINATION; FREE FROM WELD OR WELD REPAIRS.  
WE CONFIRM THAT THE MATERIAL HAS BEEN TESTED AND FOUND TO BE FREE FROM RADIOACTIVE CONTAMINATION.

we certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin



AUTHORIZED WORKS INSPECTOR  
RADHAKRISHNA MURTHY



(Z03)Inspector's Stamp