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### 304/L Round Bar 1 To 4 Inch

#### **MATERIAL SPECIFICATIONS**

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REVISION DATE: 07/31/18

|                 |   |                                 |        |
|-----------------|---|---------------------------------|--------|
| <b>MATERIAL</b> | STAINLESS ROUND BAR 304/304L<br>1" TO 4" 12-14' R/L | SMOOTH TURNED<br>DUAL CERTIFIED | RMS 50 |
|-----------------|---|---------------------------------|--------|

|                       |   |
|-----------------------|---|
| <b>SPECIFICATIONS</b> | <p>ALL SPECIFICATIONS WITH LATEST YEAR REVISIONS<br/>AISI 304,304L UNS# S30400/S30403, DIN# WNR 1.4301/1.4307</p> <p>ASTM A182, ASTM A193 B8 CL1, ASTM A262 PRACTICE E, ASTM A276.<br/>ASTM A314, ASTM A320 B8 CL1, ASTM A388, ASTM A479, ASTM A484<br/>ASME SA182, ASME SA193 B8 CL1, ASME SA320 B8 CL1, ASME SA479<br/>AMS 5639, AMS 5647, SAE-AMS-S-7720A, QQ-S-763F COND A, MIL-S-862 B,<br/>NACE MR 0175, MR 0103, EN 10088-3, EN 10204-3.1, EN 10222-5, EN 10272,</p> |
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| <b><u>CHEMICAL ANALYSIS</u></b>    | <b><u>MECHANICAL PROPERTIES</u></b> |
|------------------------------------|-------------------------------------|
| Carbon ( C ) .03                   | Tensile Strength 75 KSI             |
| Chromium (Cr) 18.00/20.00          | (U.T.S.)                            |
| Cobalt (Co) aim .10 max            | Yield Strength 30KSI                |
| Copper (Cu) 1.00 aim .75 max       | (Yield)                             |
| Manganeses (Mn) 2.00 aim 1.50-1.75 | Elongation 40%                      |
| Molybdenum (Mo) 1.00 aim .75 max   | (Ei. or Elong.)                     |
| Nickel (Ni) 8.00/10.50             | Reduction of Area 50%               |
| Nitrogen (N) .10                   | (R.A. or Red.)                      |
| Phosphorous (P) .045               | Hardness 140/241 Max                |
| Silicon (Si) 1.00                  | (RB,RC,or BHN) aim 170-223          |
| Sulfur (S) .03 aim .02-.03         |                                     |

All singular chemistry values are  
MAXIMUM unless otherwise noted

All mechanical properties are  
MINIMUM unless otherwise noted

#### **OTHER TEST(S) AND/OR REQUIREMENTS**

INTERGRANULAR CORROSION TEST (FREE FROM CONTINUOUS CARBIDE)  
AS PER ASTM A262-02 PRACTICE E  
MACRO ETCH TEST & MICRO STRUCTURE TO BE SATISFACTORY  
ULTRASONIC TESTED AS PER ASTM A388  
MERCURY FREE CONTAMINATION STATEMENT  
FREE FROM RADIOACTIVE CONTAMINATION  
NO WELDING OR WELD REPAIR STATEMENT  
REPORT GRAIN SIZE PER ASTM E112-96  
SOLUTION ANNEALED PER ASTM A479 AT 1040C/1900F MINIMUM AND WATER QUENCH  
HEAT TREATMENT TEMPERATURE AND TIME (HOURS SOAKED) MUST BE REPORTED  
FINISHED CONDITION RMS 50 MAX, MELT AND HOT WORKING PRACTICES (FORGED OR ROLLED) REPORTED  
GRADE AND HEAT NUMBER MUST BE METAL STAMPED AT BOTH ENDS ON SIZES 1" DIA. AND LARGER  
COLOUR CODE RED  
BUNDLE WEIGHT - 2200 LBS MAXIMUM

#### **IMPORTANT:**

ORIGINAL CERTIFICATES OF CHEMICAL & PHYSICAL ANALYSIS REQUIRED TWO (2) WEEKS BEFORE  
SHIPMENT ARRIVES  
ALL TEST REPORTS MUST STATE COUNTRY OF ORIGIN  
TEST REPORTS MUST HAVE THE NAME AND TITLE PRINTED  
ALL TEST REPORTS MUST BE SIGNED BY AUTHORIZED PERSON