

**STANDARD REFERENCE:**
**EN 10088-3: 2005** (Hot-rolled and bright products)

**RODACCIAI REFERENCES AND COMPARABLE STANDARDS**

| EUROPE           |        | ITALY | GERMANY   |    | FRANCE            | UK                | USA  |
|------------------|--------|-------|-----------|----|-------------------|-------------------|------|
| EN 10088-3: 2005 |        | -     | -         |    | (NF A 35-574-90)  | (BS 1501 pt.3-90) | AISI |
| Grade            | N°     |       | Werkstoff | N° |                   |                   |      |
| X2CrNiMoN22-5-3  | 1.4462 | -     | -         | -  | Z3 CND 22 - 05 AZ | 318 S 13          | -    |

**CHEMICAL COMPOSITION (CAST ANALYSIS) (%)**

| C / max | Si / max | Mn / max | P / max | S / max | N         | Cr        | Mo       | Ni      |
|---------|----------|----------|---------|---------|-----------|-----------|----------|---------|
| 0,030   | 1,00     | 2,00     | 0,035   | 0,015   | 0,10÷0,22 | 21,0÷23,0 | 2,50÷3,5 | 4,5÷6,5 |

**MECHANICAL PROPERTIES - Rough turned (1X) in the annealed condition**

| Size max (mm) | Hardness HB max*** | Rp <sub>0,2</sub> (MPa) min | R <sub>m</sub> (MPa)** | A <sub>5</sub> (%) min** | KV (J) min | Resistance to intergranular corrosion |                         |
|---------------|--------------------|-----------------------------|------------------------|--------------------------|------------|---------------------------------------|-------------------------|
|               |                    |                             |                        |                          |            | in the delivery condition             | in the welded condition |
| 100           | 270                | 450                         | 650÷880                | 25                       | 100        | YES                                   | YES                     |

\* Only for guidance \*\* The maximum HB values may be raised by 100HB or the tensile strenght value may be raised by 200 MPa and the minimum A% value may be lowered to 20% for bars of ≤35 mm

**WORKING TEMPERATURES RECOMMENDED**

| Operation | Hot forgings deformation | Solution annealing (water, air) |
|-----------|--------------------------|---------------------------------|
| °C        | 900÷1200                 | 1020÷1100                       |

