P530

P530 is a Special non-magnetic, austenitic Mn-Cr-N-steel with a Nickel-content of < 2%. Stainless steel for non-magnetic drill collars

Chemical Composition

Grade	Chemical composition WT %							
	C	Si	Mn	P	S	Cr	Ni	N
P530	max0.05	max1.00	18-20	max0.03	max0.015	13-14	max 2.00	0.25-0.40

Mechanical Properties

P530 Mechanical properties

- OD less than 4"
  - Tensile strength R_m N/mm^2: Min 900
  - Yield Strength R_p N/mm^2: Min 830
  - Elongation A %: min 25%
  - Reduction of area %: min 50%
  - Impact energy %: min 122 J
  - Hardness Brinell: 260-350
- OD 4" to 9 1/4"
  - Tensile strength R_m N/mm^2: Min 830
  - Yield Strength R_p N/mm^2: Min 760
  - Elongation A %: min 25%
  - Reduction of area %: min 50%
  - Impact energy %: min 122 J
  - Hardness Brinell: 260-350

Physical Properties

Relative permeability: < 1,001.

Magnetic inspection: Drill collars are 100% tested by a proprietary probe-testing process using a Förster Magnetomat 1.782. (“Hot Spot“-test). Magnetic permeability of each collar is certifi ed with the printout of probe-testing. - Ultrasonic inspection: Each collar is ultrasonically inspected over 100% of the volume according to ASTM E 114, last edition as a minimum level.