SBO

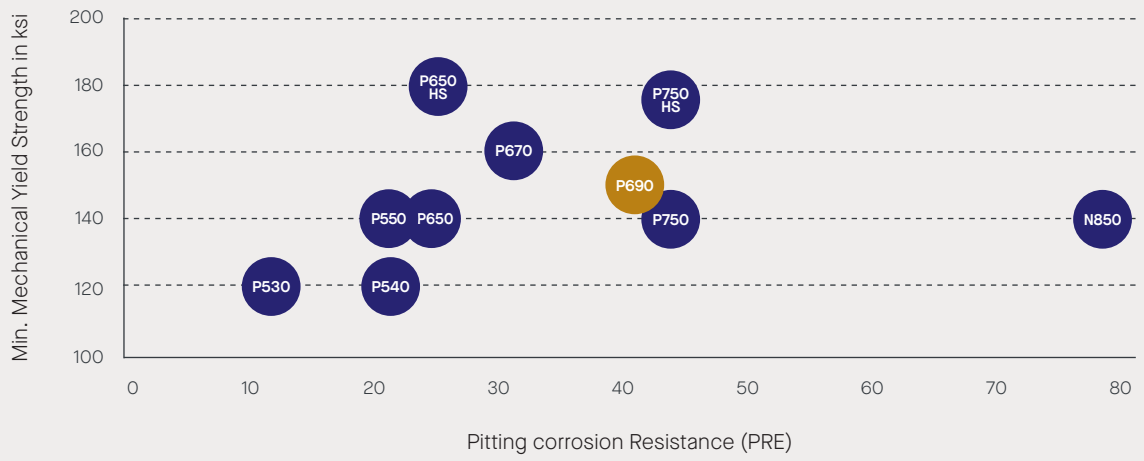
Our Steel.
Your Opportunities.

P690 SBO X-TREME STEEL

SBO – Largest supplier of nonmag steel worldwide

Overview SBO nonmag steel

Choose your steel out of our comprehensive product basket.



Corrosion behaviour (at elevated temperature)

The critical pitting temperature (CPT) value (acc. ASTM G48 method E) was determined at 70 (+/- 5) deg C.

Weldability

P690 - SBO X-TREME STEEL can be easily welded using all types of standard welding processes and following standards of welding austenitic stainless steels.

Machinability

P690 - SBO X-TREME STEEL can be machined easily using technologies as deep hole drilling, milling, turning etc. Ask us for appropriate cutting parameters!

What do we offer to our valued customers?

- 100 years of experience in steel developing
- P690 - SBO X-TREME STEEL was developed for the Oilfield Upstream business and comprises the large application area drilling & evaluation till completion.
- P690 - SBO X-TREME STEEL is produced in accordance with the highest quality standards. SBO is certified according to ISO 9001, EN 9100, ISO 14001 and API 7-1.
- Round bars with dimensions from 3 ½“ to 18“ OD and variable lengths up to 36 ft can be delivered.
- P690 - SBO X-TREME STEEL is available on worldwide stock.
- P690 - SBO X-TREME STEEL is highly price competitive.

General Information

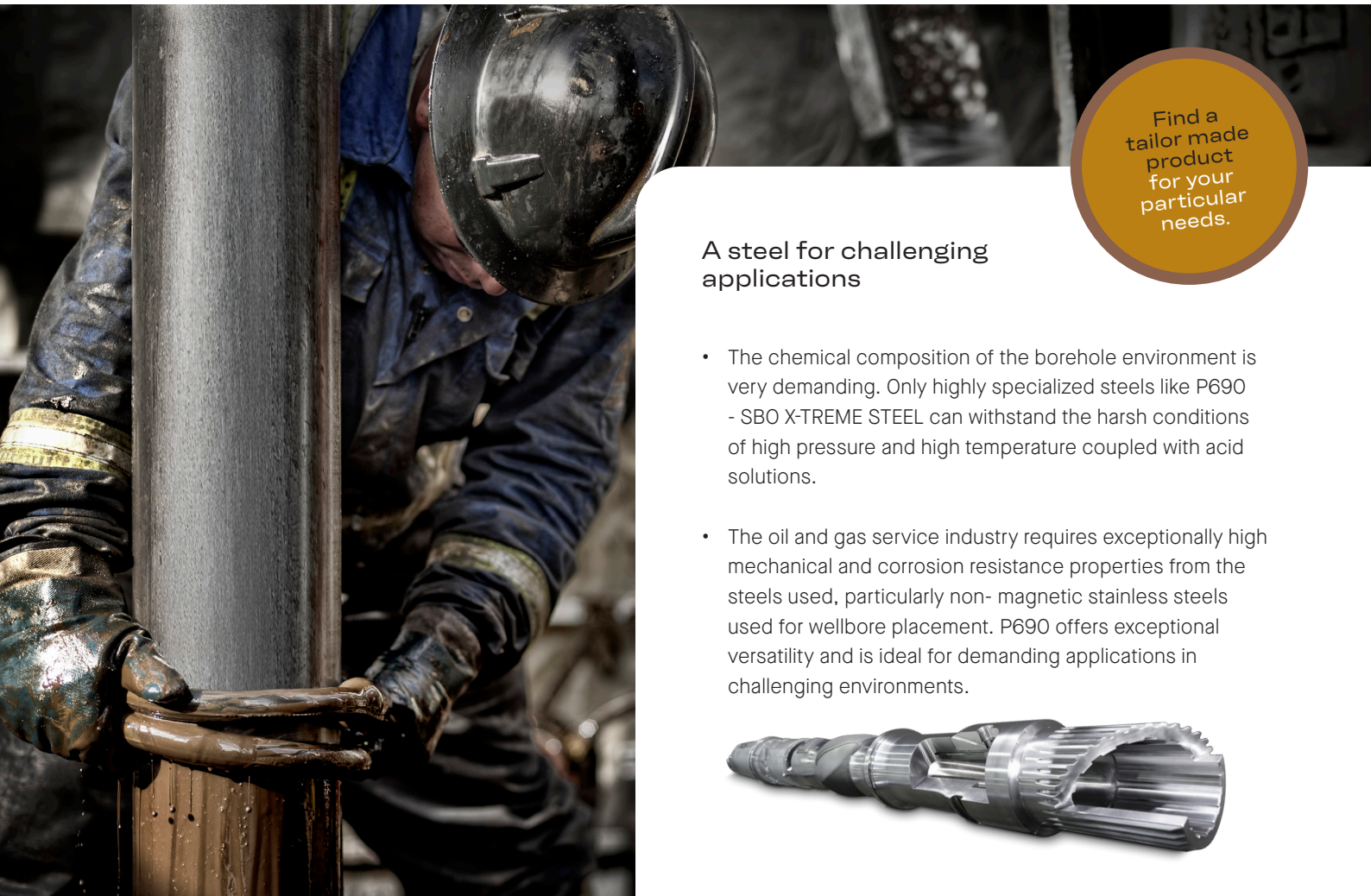
Corrosion behaviour, mechanical strength and price

The P690 - SBO X-TREME STEEL chemistry (alloying composition in weight %)

C	Mn	Cr	Ni	Mo	N
max. 0,05	3,00 - 8,00	22,00 - 28,00	14,00 - 18,00	3,00 - 5,00	min. 0,40

The P690 mechanical properties

Yield Strength (min.) : 0,2% - offset method	**OD** up to 9 ¼	140 ksi	965 N / mm²
	OD up to 9 ½ and larger	130 ksi	900 N / mm²
Tensile Strength (min.)		150 ksi	1035 N / mm²
Elongation (min.)		20 %	20 %
Reduction of area (min.)		50 %	50 %
Impact Energy (min.)		120 ft.lb	162 J
Endurance Strength / N = 10^5 (min.)		± 90 ksi	± 550 N / mm²
Hardness Brinell		350 - 450 HB	350 - 450 HB



Find a tailor made product for your particular needs.

A steel for challenging applications

- The chemical composition of the borehole environment is very demanding. Only highly specialized steels like P690 - SBO X-TREME STEEL can withstand the harsh conditions of high pressure and high temperature coupled with acid solutions.
- The oil and gas service industry requires exceptionally high mechanical and corrosion resistance properties from the steels used, particularly non- magnetic stainless steels used for wellbore placement. P690 offers exceptional versatility and is ideal for demanding applications in challenging environments.

Corrosion resistance

The chemical aggressiveness of the substances used in oil and gas production, including hydrogen sulfide (H_2S), carbon dioxide (CO_2), salt water, and other corrosive elements, requires steels with superior corrosion resistance.

Mechanical strength

The extreme mechanical stresses caused by high pressures, temperatures and fluid forces require materials with superior strength. P690 - SBO X-TREME STEEL offers the advantage of an excellent combination of strength and ductility. Even at extremely low temperatures, the material remains flexible and does not become brittle, making it ideal for hydrogen applications.

High compressive strength for special designs

In deep-sea or high-pressure production, the requirements for compressive strength increase exponentially. With the appropriate designs and manufacturing processes, P690 - SBO X-TREME STEEL meets these requirements without sacrificing corrosion resistance.

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