HS API Sucker Rod & Pony Rod

OVERVIEW

HS is a new product grade introduced in API 11B 2025 specification. Talyored to customer well conditions and usage preference, SANHE offers two flavors of HS. The quenched and tempered version is manufactured with UNS G31300 steel and the normalized and tempered version UNS G4330. For wells with medium to heavy load and has corrosion, HS is the best choice due to its high tensile strength and superior corrosion resistance.

PRODUCT FEATURES

The special Q&T heat-treatment process for HS 3130 version creates a denser martensitic internal grain structure. This helps to slow down the development of inter-granular fracture in corrosive environment, giving HS improved fatigue and corrosion resistance performance.

HS shares standard API dimension and design and SANHE's standard manufacturing features including cold rolled pin threads for extra strength and whole-body shot-peening for improved fatigue resistance. All sucker rod are coated with rust inhibitors, bundled with rust-free spacers, and securely packaged with end-caps for individual rods and bundles.

DESIGN CONSIDERATIONS

When designing with HS, we recommend using a service factor up to 1.0 in design software to ensure reliability. When adopting HS for PCP wells, SANHE's HT series products with modified API pin design is highly recommended.

CHEMICAL COMPOSITION

Steel	C	Mn	P	S	Si	Cu	Ni	Cr	Mo
3130	0.22-0.29	0.71-1.00	0.025 Max	0.035 Max	0.15-0.35	0.35 Max	0.70-1.00	0.41-0.65	0.05 Max
4330	0.30-0.37	0.70-0.95	0.025 Max	0.025 Max	0.15-0.35	0.25 Max	1.65-2.00	0.80-1.10	0.20-0.30

MECHANICAL PROPERTIES

Tensile Strength		Yield		Elongation	Reduction	Hardness
ksi	Mpa	ksi	Mpa	(2", %)	%	(HRC)
140-155	965-1068	130 Min	896 Min	11 Min	50 Min	30-35

DESIGN PARAMETERS

$$Sa = SF\ (\frac{140{,}000}{2.8} + 0.375\ S_{min})$$

Note: Sanhe recommends using service factor (SF) 0.8-1.0 in well design to ensure reliability.

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