EL® High-Strength Sucker Rod

Increases uptime in heavy-load applications and harsh well environments

Applications

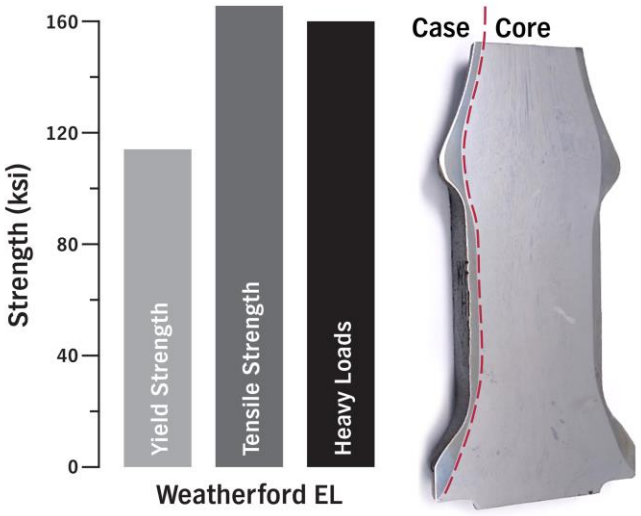
- Super high-load capacity in mild or sweet, corrosive environments[1]
- Reciprocating rod-lift systems
- PCP systems

Features and Benefits

- High yield- and tensile-strength properties provide greater length capabilities for uncompromised well depths
- Light-weight strength allows for reduced pumping-unit size and energy savings with no reduction in production rates
- Outer surface is permanently prestressed up to 120 ksi (827 MPa) for greater reliability and endurance
- Reduced diameter allows for smaller, more-economic tubing sizes

Tool Description

Weatherford EL high-strength sucker rods provide an ultra-high load rating and corrosion-fatigue resistance for improved uptime in heavy-load applications and harsh well environments. The exclusive induction case-hardening process gives EL sucker rods the superior fatigue resistance required for the most aggressive pumping environments. Their compression layer on the surface of each rod retains its high consitution under severe compression as well as with normal operating tensile loads. This added tensile-stress surface protection greatly reduces the chance of fatigue cracks.



EL high-strength sucker rods with core-harded properties provide high yield and tensile strengths suitable for heavy loads.

Weatherford EL high-strength sucker rods provide superior strength and long-lasting durability in corrosive environments.

Weatherford®

[1] Provided satisfactory corrosion inhibiting practices are followed

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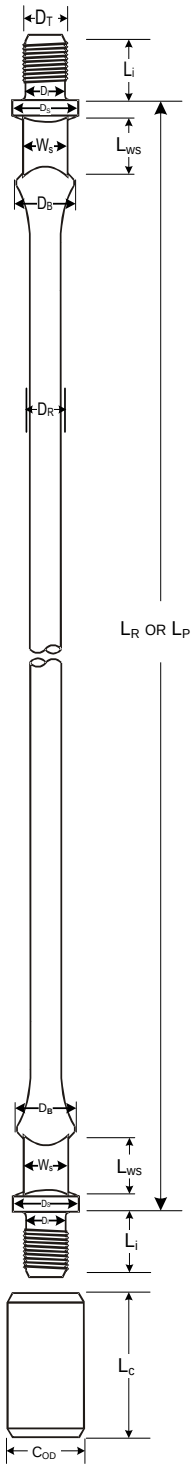

Specifications

ID Description

		Nominal Size[2]		
D_R	Rod-body diameter	.75 in. (19.05 mm)	.875 in. (22.23 mm)	1 in. (25.4 mm)
D_S	Pin-shoulder outside diameter	1.5 in. (38.1 mm)	1.625 in. (41.28 mm)	2 in. (50.8 mm)
D_T	Nominal-thread diameter	1.063 in. (26.99 mm)	1.187 in. (30.16 mm)	1.5 in. (38.1 mm)
L_i	Pin length	1.437 in. (36.51 mm)	1.625 in. (41.28 mm)	1.875 in. (47.63 mm)
W_S	Wrench-square width	1 in. (25.4 mm)	1 in. (25.40 mm)	1.313 in. (33.34 mm)
L_{WS}	Wrench-square length	1.25 in. (31.75 mm)	1.25 in. (31.75 mm)	1.25 in. (31.75 mm)
D_B	Bead diameter	1.4 in. (35.72 mm)	1.5 in. (38.1 mm)	1.9 in. (48.42 mm)
D_I	Stress-relief diameter	.915 in. (23.24 mm)	1.04 in. (26.42 mm)	1.22 in. (31.17 mm)
L_{R1}	Sucker-rod length[1]	25 ft (7.62 m)		
L_{R2}	Sucker-rod length[2]	30 ft (9.1 m)		
L_P	Pony-rod length	2 ft (.6 m), 4 ft (1.2 m), 6 ft (1.8 m), 8 ft (2.4 m), 10 ft (3 m)		
L_C	Coupling length	4 in. (101.6 mm)		
C_{OD}	Coupling outside diameter, SH	1.5 in. (38.1 mm)	1.625 in. (41.3 mm)	2 in. (50.8 mm)
C_{OD}	Coupling outside diameter, FH	1.625 in. (41.3 mm)	1.812 in. (46 mm)	2.187 in. (55.6 mm)

Approximate Weight of 25-ft Rod

API Size	Without coupling	With full-hole coupling	With slim-hole coupling
.75 in. (19.05 mm)	38.5 lbs (17.5 kg)	40 lbs (18.1 kg)	39.8 lbs (18.1 kg)
.875 in. (22.2 mm)	52 lbs (23.6 kg)	53.8 lbs (24.4 kg)	53.5 lbs (24.3 kg)
1 in. (25.4 mm)	69.9 lbs (31.7 kg)	72.5 lbs (32.9 kg)	71.9 lbs (32.6 kg)

Maximum Allowed Stress Calculation

$S_A = (55{,}000 \text{ psi} + .2143\, S_{MIN}) * SF$

[2] Other nominal sizes available, contact your Weatherford representative

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