ES SUCKER RODS



The ONYX Family of Enhanced Sucker Rod Products

SPECIFICALLY FORMULATED FOR MEDIUM DEPTH WELLS

Our patent pending ES sucker rod is manufactured from micro-alloyed nickelchromium-molybdenum steel. All ES sucker rods come with an extended pin to help reduce connection failures.

BETTER METALURGY-BETTER PROPERTIES

Starting with the highest quality, specially formulated SBQ (special bar quality) steel, we normalize and temper each rod using precisely controlled high-accuracy furnaces. All ES rods are shot peened to exacting LUFKIN standards, for increased resistance to fatigue and corrosion. Our highly refined material selecton and manufacturing processes deliver sucker rods with improved corrosion tolerance and impact properties.

MAXIMIZE RUNTIME

Our newest grade of sucker rod is designed to improve performance and maximize runtime in fluids that are effectively inhibited to prevent corrosion. This sucker rod features an extended pin suitable for both reciprocating and PCP applications.

AMERICAN MADE-LUFKIN QUALITY

LUFKIN Rods are manufactured in the only privately owned and operated sucker rod plant in the USA. All ONYX products are sourced and manufactured domestically, and our advanced manufacturing processes ensure the highest quality possible. Our automated system continually monitors each step to ensure consistently high quality from start to finish. LUFKIN's quality control is unmatched throughout the industry.

LUFKIN EXPERIENCE-LUFKIN EXPERTISE

We offer more sucker-rod experience than any other provider and can deliver unparalleled solutions for all your rod lift applications. LUFKIN Rods provides expert help with predictive designs, product selection, failure analysis, and training to help you attain your production goals. Put our experienced team to work to boost uptime, enhance MTBF, and improve your bottom line.

API 11B License Number: 11B-0189 API Q1 Registration Number: Q1-4792 ISO 9001 Registration Number: 5118



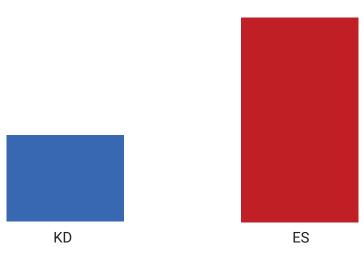
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SUCKER ROD - GRADE ES - SPECIFICATIONS



MECHANICAL

Yield Strength, 2 inch offset, psi	85,000
Tensile Strength, psi	115,000—130,000
Elongation, 8 inches, %	10 min
Reduction of Area, %	45 min



Charpy Impact Results

ASTM E23

The ES Sucker Rod had more than a 50% increase in impact toughness when compared against the KD (D Special) Sucker Rod.

HIGHER IMPACT PROPERTIES-BETTER FATIGUE RESISTANCE

Cleaner steel, the right combination of specially formulated, micro-alloyed elements, and carefully controlled thermomechanical processing results in a new grade of sucker rod with higher impact properties, better fatigue resistance, and more corrosion tolerance than other API Grade D Special Sucker Rods. Impact properties measure the ability of the steel to resist cracking, fracturing, or plastic deformation under sudden and intense impact, or shock loads. Higher impact properties increase the fatigue resistance of the steel, lowers the potential for a crack to form, and helps slow propagation should a crack form.



Made to Perform

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