Increasing efficiency of oil fields

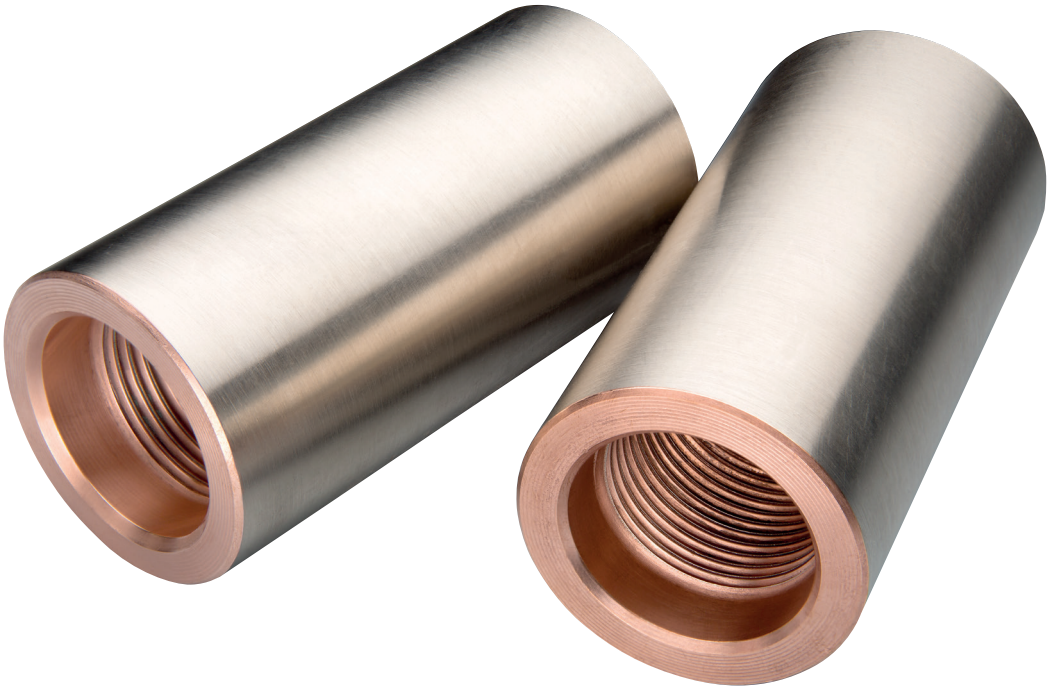
Materion Corporation is well known as the world's only fully integrated provider of beryllium and beryllium alloys. The company also boasts a reputation for industry-specific, engineered solutions, with its proprietary copper-nickel-tin alloy ToughMet®, notably. The recently introduced new ToughMet® 3 Sucker Rod Couplings address important oilfield operation issues for oil producer, as Bill Nielsen, Product Marketing Director at Materion, explains. The ToughMet® 3 couplings were tested in oilfields and demonstrated at an oil and gas trade show, proving that their unique properties can double the interval between well-workovers, effectively reducing one of their major operating costs and increasing the oil field's earnings by eliminating costly production interruptions.

The properties of Materion Performance Alloys' high-strength, copper-nickel-tin ToughMet®® alloys provide many advantages in demanding end-use applications. Mr. Nielsen points out that over the past ten years, commercial aerospace sales in particular have taken off for ToughMet®. The premium copper-nickel-tin alloy today is on almost every commercial aircraft in production, including significant content on the Boeing 787 and 747-800, Airbus A380 and the newly designed A350 XWB. Beyond aerospace, ToughMet® has won converts in many demanding industrial applications around the world: Materion serves customers in more than 50 countries with operating, service centers and major office locations throughout North America, Europe and Asia.

ToughMet® has been a successful and significant business segment for Materion in directional drilling, but oil production as yet is a relatively small industry vertical for the alloy. Materion does, however, see growth opportunities for specific applications, says Mr. Nielsen. "ToughMet® couplings resist mechanical wear, thread damage, corrosion and erosion. They are non-galling, so they do not damage production tubing, and they retain their strength even at elevated temperatures. This combination of attributes minimises the frequency of workovers associated with couplings made of other materials. These are all qualities the oil industry needs, particularly now that oil is more difficult than ever to recover."

Case in point: in oilfields, rod couplings which join individual 25-foot sucker rods into long strings that connect the pump jack on the ground and the pump in the well. Strings can reach 10,000 feet in length, so as many as 400 of these couplings can be required in one well. In areas where wells are curved, couplings rub against the inside of the tubing, causing damage and well failure. Materion's new TougMet® 3 Sucker Rod Couplings address all of these issues, as proven in live field testing by oil exploration and production company Hess in oilfields in North Dakota, where they significantly reduced the frequency of damage to sucker rod couplings and production tubing.

The new couplings are indeed of high value to Hess and the industry at large, says Mr. Nielsen, as they deliver quick and significant returns. "The cost of getting an oil well up and running again after mechanical failure can amount to hundreds of thousands of dollars. Repairing damage may take weeks as oil fields generally are in remote areas. Our new couplings mitigate 50% of well failure risk."



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