

CATHODIC PROTECTION FOR WELL CASINGS

Corrosion protection for oil production, water disposal and gas storage



Drilling wells to reach underground oil & gas deposits or subsurface structures to dispose of produced water can be costly. Well casings used in these systems are often exposed to corrosive substances during operations. Protecting these well casings is vital in order to ensure safe, long-term operation, and avoid the costly replacement of failed casings.

Corrosion on well casings can come in the form of general corrosion or as more localized corrosion in areas where elements such as aquifers, soil conditions or salt caps can accelerate the corrosion rate. Cathodic protection has been used successfully for decades as a means to protect casing strings in production and disposal wells.

Factors such as well depth, casing size, soil corrosivity and electrical continuity must be considered during the design process. Anode systems that are sized or installed incorrectly can degrade rapidly, leading to premature depletion, requiring replacement in order to adequately manage active corrosion.

Well casings may seem straightforward, but they are complicated by the multiple casing strings, the casing head and casing hangers. Electrical continuity across all the strings can be a concern when designing effective cathodic protection for the well. Experience with this level of complexity results in pragmatic and effective cathodic protection systems.

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Proper protection of well casings can provide years of trouble-free operations and minimize required maintenance. Inspection of the casings is generally expensive, with access for inspection tools often limited by surface equipment and the casing hanger. A purpose-built cathodic protection system prevents corrosion and typically represents 1-3% of the cost of a well. Ongoing monitoring of the cathodic protection system can then be performed without production interruption.

With over 40 years of experience with designing and installing systems that provide long-term protection, Corrpro's well casing solutions meet both NACE and API guidelines and are very similar to conventional deep anode groundbed (DAGB) systems. Wells with adequate cathodic protection have far fewer leaks and failures than unprotected wells.

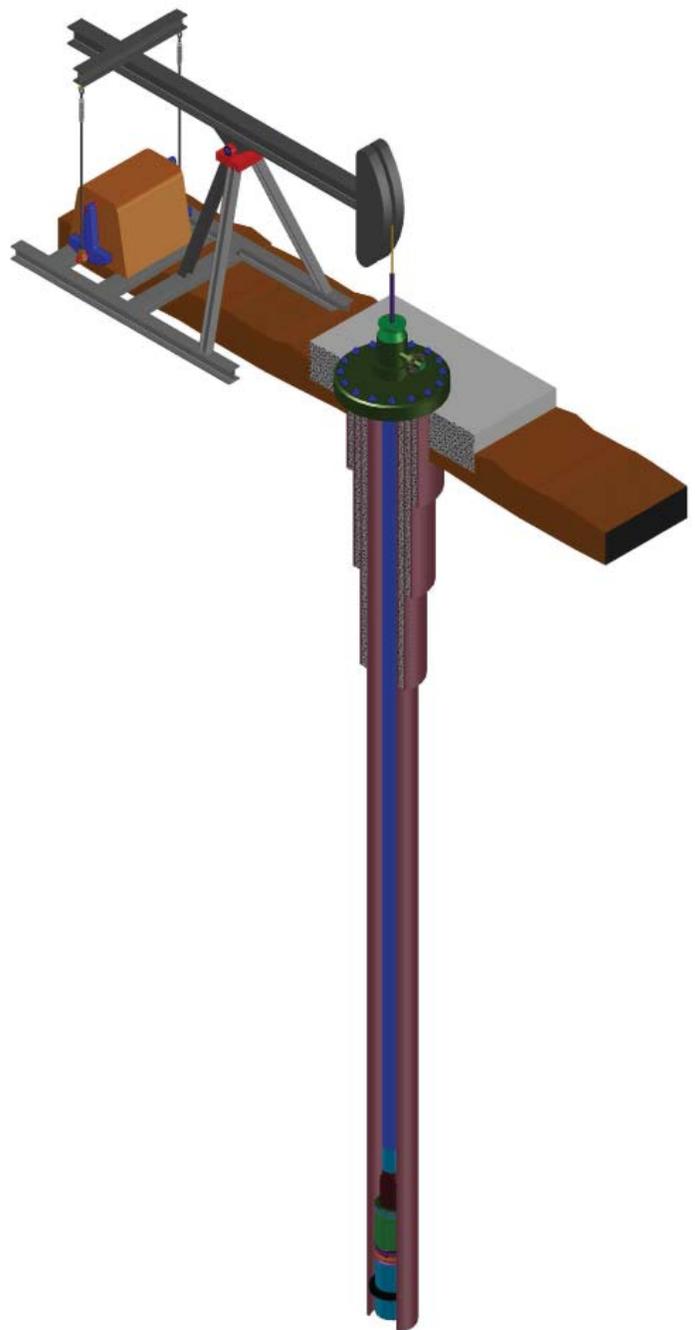
About Corrpro

With extensive crews and locations, Corrpro, an Aegion Company, can deliver rapid turnaround on projects large and small. We mobilize from 11 offices throughout the world, and no project is too large or too small for us to tackle.

Safety

Our rigorous safety program consistently achieves superior industry results. Our emphasis on leading indicators helps prevent safety issues before they occur. We are focused companywide on giving frontline supervisors the authority and tools they need to operate a safe jobsite. This translates into some of the best safety performance statistics in the industry.

Corrpro helps our clients protect their well casings to ensure safe, long-term operation. Proper protection against corrosion can provide years of trouble-free production, reduce inspection costs and minimize required maintenance.



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