

## Pioneering Spirit

### TR safety encoders help lifting complete drilling platforms.

With a length of 382 meters and a width of 124 meters, the Allseas Pioneering Spirit is the largest work ship in the world. The Pioneering Spirit was specially developed to lift large offshore platforms of up to 48,000 tons out of their anchoring ("jacket") and to lift the anchoring of up to 20,000 tons that rests on the seabed. The platform can thus be transported in one piece and, for example, dismantled on land instead of at sea. This significantly reduces the work involved in setting up and dismantling drilling platforms.

The gigantic work ship has 16 swell-compensated hydraulic beams at the front, the so-called "Topsides Lift System" (TLS), which can lift the platform, and at the rear a gigantic tilt-beam system, the so-called Jacket Lift System (JLS), with a large number of winches to raise the foundations. In order to monitor the operation of these lifting systems, TR-Electronic Safety Encoders were attached to the rigging and lifting devices.

The extended position is monitored on the lifting beam of the TLS. In addition to the regular control and monitoring system, the hardware and software engineers at Allseas have developed a completely independent safety system with the help of a PROFIsafe Safety PLC and TR-Electronic Safety Encoders, in which a safe position is programmed in which a lifting beam can move. Should a lifting beam exceed these safety values despite all measures, a safety PLC intervenes and stops the movement immediately.

With the JLS, for example, the position of the lifting frame and the speed at which the lifting load rises or falls are continuously monitored with TR-Electronic Safety Encoders. In the Safety PLC, which works completely independently of the regular control, a safe speed is programmed at which the lifting load can move. If the lifting load moves faster than the set safety values, the safety system also intervenes here.

Pioneering Spirit, that's what drives TR-Electronic, based in southern Germany. TR-Electronic launched its first certified PROFIsafe safety encoder back in 2009 and has been continuously at the forefront of new developments on the market for safety encoders ever since.

With a diameter of only 58 mm, the SIL3 / PLe-certified safety encoders used by Allseas are currently the most compact optical PROFIsafe encoders on the market.

TR-Electronic contributes to the fact that man and machine can work together safely.

[www.tr-electronic.com](http://www.tr-electronic.com)

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Biggest working ship Allseas Pioneering Spirit  
Courtesy to Allseas Group S.A.