

DEEPWATER

SMARTCLAMP™ TEST STATION FOR PIPELINES & TUBULARS CATHODIC PROTECTION MONITORING

SmartClamp is a self-contained CP test station for subsea pipelines that's powered by shining a light at it.

The Polatrak® SmartClamp is a cathodic protection (CP) test station that combines three Deepwater products: a RetroClamp (ROV or diver-installed tubular clamp) fitted with a SunStation permanent subsea readout and a V-String zinc reference electrode. This combination results in a cost-effective, self-contained CP test station that's ideal for unburied subsea pipelines and tubular members where the area of interest is the same as the area of access. The SmartClamp can eliminate corrosion survey costs in any subsea application where ROV-assisted work is routinely conducted. No CP probes are required. The ROV visually interrogates the SmartClamp with its light and reports the cathodic protection potentials via video camera.

Each clamp's SunStation is a single-channel device with an independent ground, and it's powered by a solar panel, making it perfect for displaying readings from the SmartClamp test station. No battery is required to power the readout, so the system can function reliably for up to 20 years. A diver or ROV activates the system by shining light directly at the clamp; the light is collected by the solar panels and powers the LED readouts.

Provides accurate, repeatable data

Since the units will be checked repeatedly in the same location and position, the data they provide are more accurate and reliable to cathodic protection engineers, who routinely must place one incompatible CP survey next to another in order to try and trend data. The nature of the system's configuration and the way it measures CP also creates a built-in verification for proper connection when the system is installed. This largely eliminates the need for a cathodic-protection specialist to be present during installation.

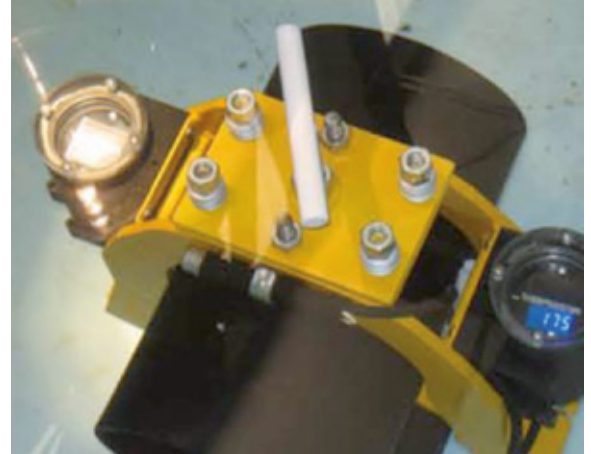
A multitude of potential applications

Unburied subsea pipelines - Depending on the water depth, SmartClamp can be easily retrofitted on an unburied subsea pipeline with divers or ROV. Once installed, the system can be interrogated by an ROV or a diver with a flashlight. It's ideal for risers and points along a pipeline where no topside interface is available.

Tubular members at critical points on fixed structures - For structures and other subsea equipment, the SmartClamp can be placed near any critical area and attached to a tubular member. The RetroClamp system that attaches the reference electrode and readout comes in standard sizes from 6 inches to 36 inches. Custom sizes as well as flange-mount systems are also available.

Anywhere ROV CP inspection is required - Potential applications for the SmartClamp are endless. For special circumstances such as areas where more complex monitoring is available or where pipelines are buried, please see the SunStation system for an example of how Polatrak components can be customized to suit almost any monitoring requirement.

More info at www.stoprust.com



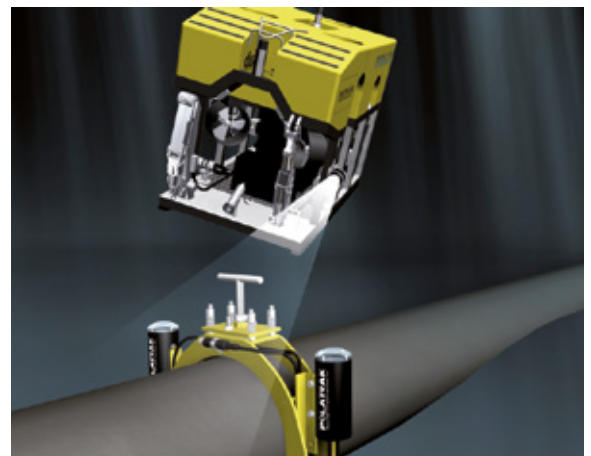
SMARTCLAMP

The solar panel on the clamp's left side powers the LED readout on the right, delivering potential readings from the zinc reference (just above the pipe)



STAINLESS STEEL

The ultra-bright LED; stainless steel housings are available, rated up to 3,000m



SMARTCLAMP IN SITU

SmartClamp shown on a pipeline; the lights from the ROV activate the readout