

DEEPWATER

RetroSled™

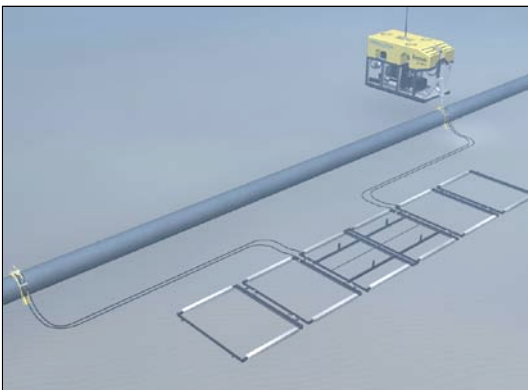
Anode Sled for Pipeline Cathodic Protection Retrofits



RetroSled w/ 2 clamps being overboarded



Expanding sled ships and deploys 12' x 8'



Expanding sled measures 40' on bottom

The RetroSled allows operators to easily replace cathodic protection anodes on aging pipelines.

The RetroSled is an aluminum pipeline retrofit sled, designed for pipelines life extension projects. The sled is dropped onto the seafloor and then connected electrically to the pipeline with one or two RetroClamps. A cathodic protection retrofit project conducted using the RetroSled system can add between 15 and 30 years to the life of an existing pipeline.

The sled is available in two versions: standard (rigid) and expandable (opens on the seabed). Use the standard RetroSled when extending life on a pipeline with good coating and readings that indicate the pipeline is still protected (above (-) 0.900 V vs. Ag/AgCl sw). Use the expanding sled when an extra current boost is required for a depolarized pipeline or one with degraded coating.

Both sleds are pre-programmed into Deepwater's PipeMod™ attenuation modeling system used to optimize spacing between sleds. When anode sleds are placed well, a cathodic protection designer can make the most efficient use of the anode material and minimize the number of installation sites offshore.

The RetroClamp is connected to the RetroSled by two armored cables, and a diver or ROV can install a each clamp quickly and easily. The contact tip of the clamp that creates electrical contact with the pipeline can be fitted with a soft drill bit, allowing it to penetrate concrete weight coats. In order to install a RetroClamp, only 180 degrees of a pipeline must be visible.

Reduce the intervention during installation

The Sled can be rapidly and safely deployed offshore, with little to no diver intervention. RetroClamps are fully ROV-installable.

A Proven design

RetroSled has been installed by major operators in every world market area. Thousands of miles of pipeline have been successfully retrofitted with these anode sleds.

Quality Control

Deepwater uses anodes from our two foundry locations (Houston, Indonesia), as well as from qualified third party foundries in the UK, allowing us to regulate QA/QC for all the aluminum and zinc anodes we use.