

Innovative Solution for the Prevention of Crevice Corrosion at Pipe Supports

The Problem

Corrosion at pipe supports is one of the leading causes of process piping failures.

Beam supports and pipe saddles create crevices, where water is trapped and held in constant contact with the pipe surface

Under these conditions, the corrosion mechanism will begin quickly and then undercut the paint film. Crevice corrosion causes rapid wall loss to the pipe. If these conditions are not addressed, entire sections of pipe will fail and require replacement, at great cost to the operator.

Beam and saddle clamp supports are also incredibly difficult to paint or otherwise maintain once they are in-place. Therefore, if an inferior pipe support system is installed (such as neoprene pads), corrosion can be much more difficult to remedy.

The Solution

Deepwater developed the I-Rod brand of pipe supports specifically to combat crevice corrosion and ensure a long, safe life for pipelines by eliminating the crevice between the pipe and the support.

I-Rod is a durable thermoplastic, extruded and cut into a half round rod. It is the key component in all of Deepwater's I-Rod pipe supports. The way it works is simple:

- 1** The half-round shape minimizes contact between the pipe and the support, eliminating the crevice.
- 2** It also provides an electrically isolated stand-off between the pipe and the supporting beam or saddle clamp. This allows for easy maintenance and inspection, while preventing galvanic corrosion between dissimilar metals (the pipe and support).
- 3** I-Rod also has excellent compressive strength and a very low friction coefficient. This makes I-Rod ideal as a beam dressing, and pipe damage during new construction is reduced when I-Rod is present to assist in pipe fitting.