



FIELD CASE STUDY: I-ROD® 13 YEARS AFTER INSTALLATION

How does I-Rod hold up after 13 years offshore?

The following images were recorded in 2002 during a routine topside inspection of the first offshore structure where the I-Rod system was specified for new construction. The total added cost

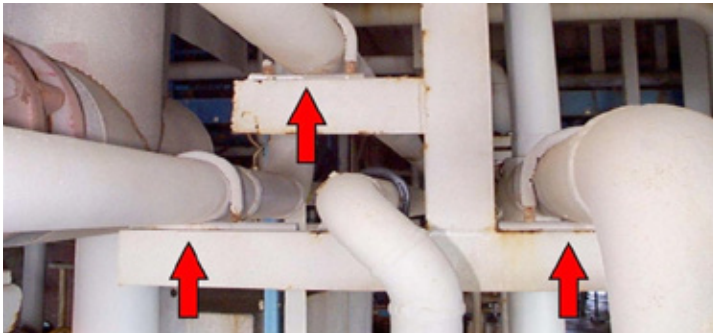
of the system, which was installed in 1989, was less than \$10,000 USD. These photos show the success of the I-Rod system, which has subsequently been used on thousands of offshore structures.



KEEPING IT FLOWING
A typical Nu-Bolt on a vertical section of a flowline.



CONSTANTLY WET
This fuel gas line is always wet (the green coloration is mold) and the beam paint system has failed, but no corrosion has occurred at the pipe support..



MAKING A POINT
More Nu-Bolts are pointed out; no crevice corrosion has occurred.



A CLOSER LOOK
Here's a closer look at the pipe support shown in the top photo above...



LOOKS WORSE THAN IT IS
Another instance where the paint has failed but there's no crevice corrosion.



STILL IN GOOD SHAPE
The pipe remains well-preserved despite the harsh offshore environment.



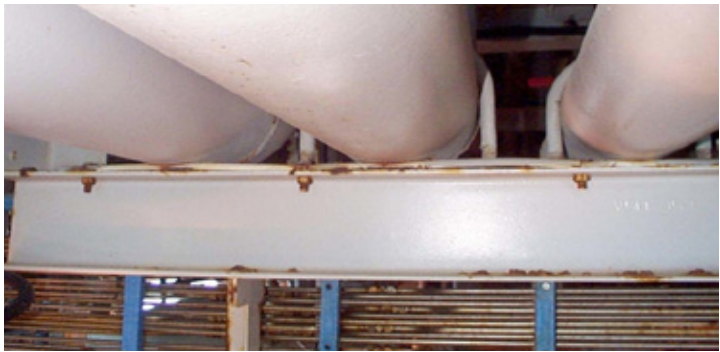
HOLDING UP WELL
I-Rod was used to dress beams beneath multiple pipes. There's no crevice corrosion.



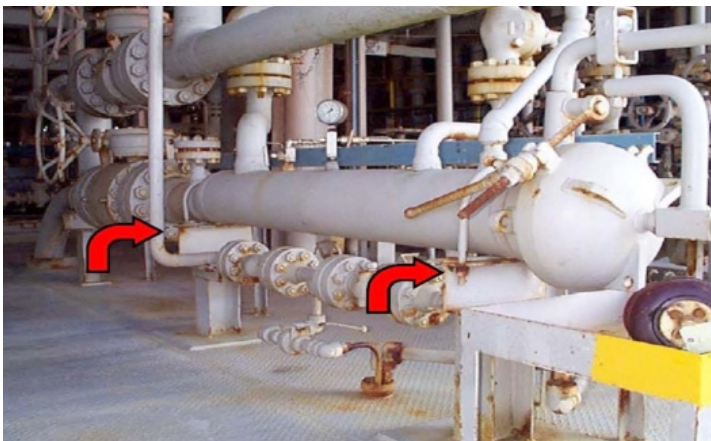
WELL-DRESSED SUPPORTS
More beam dressing on a typical pipe rack. This is 1" I-Rod.



THE PIG'S PATH
A closer shot of the area beneath the assembly shown below..



A CLOSER LOOK
Here's a closer look at the pipe support shown in the top photo above.



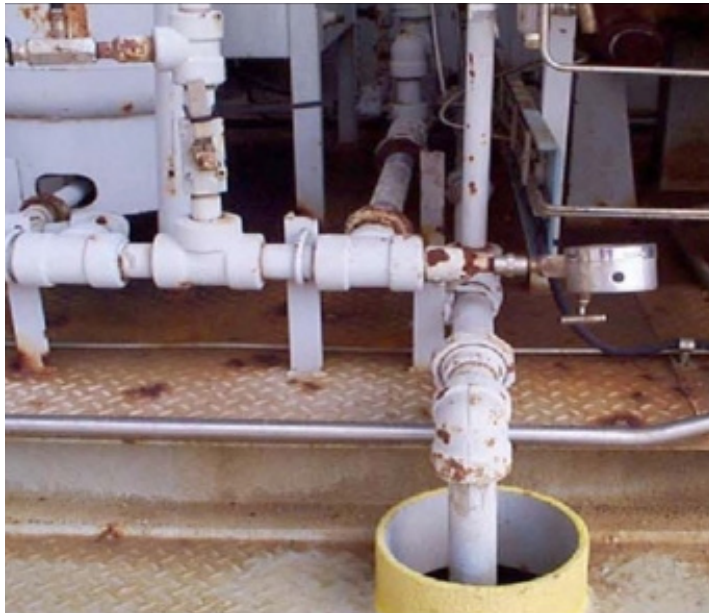
EVERYTHING'S PROTECTED
I-Rod installed under pig launch/receive barrel bolted to support beams.



TEST OF TIME
This Nu-Bolt never corroded, but has picked up a coat of paint over the years.



DRIP POINT (ELL CORROSION).
Crevice corrosion at the support is less than on girth weld.
Without I-Rod, this would have been a failure point.



SMALL PIPES, BIG HEADACHE
I-Rod is particularly effective on small-diameter screwed piping, which has the highest maintenance cost per square foot on the platform. This smaller piping is shown in the three adjoining photos.



LOW BEAM, HIGH RISK
Another pipe that stays wet, as evidenced by the mold and mildew on its surface.



SAVED BY I-ROD
A close-up of the support at left shows why the wet pipe remained in good condition.