

# Improving Corrosion Resistance and Reducing Cost for Turner Designs Hydrocarbon Instruments



## A SILCOTEK® CASE STUDY

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Turner Designs  
Hydrocarbon Instruments

*"We use every opportunity to offer SilcoTek coated products where exotic metals are specified. The cost difference is enormous and our customers receive the benefit from cost savings and equal or better performance."*

*-Gary Bartman*

## SUMMARY:

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Turner Designs Hydrocarbon Instruments Inc., a worldwide leader in the application of field portable, laboratory and online continuous process monitors for measuring and monitoring hydrocarbons in water, found that SilcoTek® coatings met their customer's need for a low cost corrosion resistant coating able to stand up to harsh environments found in oil and gas exploration. SilcoTek's Dursan® and Silcolloy® corrosion resistant coatings improved produced water corrosion resistance by 10x or more while saving Turner's customer thousands of dollars by eliminating the use of costly super alloys.

## CHALLENGES:

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Turner Designs Hydrocarbon Instruments needed an improved corrosion solution for their TD-4100 XD oil in water monitor. The TD-4100 XD is designed for rugged environments found in oil and gas exploration, but high durability corrosion resistance can require use of super duplex, or Hastelloy® over 316 stainless steel, adding tens of thousands of dollars to the cost of the instrument.

## HOW SILCOTEK HELPED:

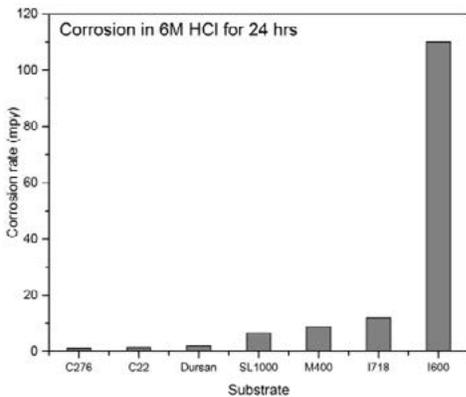
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The SilcoTek team worked with Turner Designs Hydrocarbon Instruments to select a tough, durable, corrosion resistant coating that improved produced water corrosion resistance of their 316 stainless steel oil in water components while reducing cost. SilcoTek offered free coated test coupons and trial coating, allowing Turner Designs to evaluate the effectiveness of the coating.

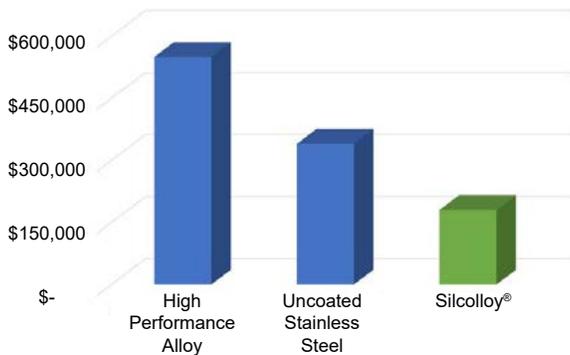
## GAME-CHANGING BENEFITS:

After evaluating the coating, Turner Designs selected our Silcolloy coating. Silcolloy offered the **durability and corrosion resistance** needed for the customer's offshore application, **while reducing the cost by over \$20,000**. Today, Turner Designs continues to lead the industry with innovative process monitors. They now offer SilcoTek's improved Dursan coating for improved durability and corrosion resistance.

SilcoTek worked with the customer to find the corrosion solution to meet Turner Designs' needs. SilcoTek's high durability and corrosion resistant coatings, Silcolloy and Dursan, significantly improve salt and sea water corrosion resistance and durability while significantly reducing cost. Dursan resists corrosive attack from sea water and most chlorides. Concentrated hydrochloric acid immersion shows Dursan and Silcolloy compare favorably to super alloys while significantly reducing life cycle cost.



SilcoTek coated 316 Stainless Steel outperforms alloys like Inconel and Monel.



Life cycle cost comparison of Silcolloy® vs. high performance alloys show significant cost savings over the life of the project.



TD-4100 XD oil in water monitor



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