# CORROSION CASESTUDIES

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## **Online Short Course**





### ONLINE, instructor-led course reviewing water corrosion failures from the refining and petrochemical industries.

#### Water is the tricky and persistent enemy of metal.

It can attack steel and other metals in a variety of ways – especially when pollutants, flow, heat, chemical treatments and bioactivity become involved. For those already familiar with the basics to corrosion, this course brings to life the subtle ways and various circumstances that water can damage metal.

#### **Course Overview**

While literature by API, ASM and AMPP (former NACE) includes ample theory describing corrosion, we have **LOTS** of pictures of it. We believe by reviewing case after case of corrosion damage, the subtleties in the various corrosion modes will become intuitive.

This 4hr course is an illustrated review numerous case studies of common waterbased corrosion mechanisms. These cases are based upon laboratory analyses of failures experienced in the refining and petrochemical industries. The course walks through dozens of examples, each illustrated by numerous photographs, helping to deepen one's understanding of corrosion.

#### **Topics Covered**

- 1. General Corrosion.
- 2. Corrosion Under Insulation (CUI).
- 3. Microbially Induced Corrosion (MIC).
- 4. Caustic and Phosphate Corrosion.
- 5. Erosion and Erosion-Corrosion.
- 6. Cavitation.

#### Who Should Attend

API inspectors, reliability, engineers, and maintenance personnel of all experience.

Great add-on training for those already familiar with API, ASM or AMPP (former NACE) materials.

Ideal for API 571 continued training. Certificate for 4 hours CPD for API Inspectors.

REGISTER FOR A SCHEDULED COURSE \$295 HOLD ONLINE FOR FACILITY \$4000

(Course materials for up to 12 participants)

#### **About the Instructors**



**Shane Turcott**, P.Eng., M.A.Sc *Principal Metallurgical Engineer* 

Shane received his B.Eng. and M.A.Sc. in materials engineering at McMaster University in Canada. He worked for Dofasco, Bodycote and Liburdi Turbine Services before founding Steel Image Inc. in 2009. He is an expert in metallurgical failure analysis and field metallography. Author of **Decoding Mechanical Failures** and **Steel Isn't Hard (to Learn)**.



**Casey Julich Trojan**, P.Eng. *Metallurgical Engineer* 

Casey received her B.Eng. in materials engineering at McMaster University in Canada. Since joining Steel Image in 2012, she has been a part of two thousand failure analyses and on-site metallurgical projects. Casey also teaches both the online course "Introduction to Examining Fractures" and in-person course "Handling Mechanical Failures".

This is the first course in a case study series. Upcoming courses include (a) corrosion cracking and (b) hydrogen damage.



#### www.steelimage.com

Steel Image is a metallurgical engineering company specializing in failure analysis and on-site damage/crack assessments. It provides metallurgical laboratory expertise, field metallography and training to support the refining, petrochemical, automotive, mining and energy industries throughout North America.