



Pipeline Corrosion Control

L1 PIPELINE CORROSION CONTROL

LEVEL 1

Curriculum Notes

- 160 Hours (Includes 72.5 hours of Core Curriculum which is a prerequisite for Level 1 completion and must be purchased separately. See p. 10 for ordering information.)
- Published: 2002
- Instructor's Guide includes access code to download TestGen software, module exams, and performance profiles from www.nccerirc.com.

PAPERBACK

ISBN

Trainee Guide: \$100 **978-0-13-046684-6**
 Instructor's Guide: \$100 **978-0-13-046685-3**

MODULES

All of the modules listed below are included in the Trainee and Instructor Guide(s) listed above. The following ISBN and pricing information is for ordering individual modules only.

Introduction to the Pipeline Industry (15 Hours)

(Module ID 66101-02; Pipeline Core; see p. 77)

Trainee \$20 **ISBN 978-0-13-038223-8**
 Instructor \$20 **ISBN 978-0-13-038234-4**

Liquid Pipeline General Abnormal Operating Conditions (5 Hours)

(Module ID 66102-02; Pipeline Core; see p. 78)

Trainee \$20 **ISBN 978-0-13-038224-5**
 Instructor \$20 **ISBN 978-0-13-038235-1**

Locating Pipeline and Cable (CT 14.1 and 17.1)

(5 Hours)

Trainee \$20 **ISBN 978-0-13-038277-1**
 Instructor \$20 **ISBN 978-0-13-038287-0**

(Module ID 61103-02) Identifies and explains One-Call notification systems and the methods used to locate pipe and cable. Also discusses the requirements for separations between underground structures, abnormal operating conditions (AOCs), and first responders.

Measure Pit Depth and Wall Thickness

(CT 8.1, 8.2, and 8.3) (5 Hours)

Trainee \$20 **ISBN 978-0-13-038278-8**
 Instructor \$20 **ISBN 978-0-13-038288-7**

(Module ID 61104-02) Explains how to use pit gauges to check pit depth, length, and profile. Describes how to take multiple readings for RSTRENG data and how to use ultrasonic meters to check pipewall thickness.

Inspect Buried and Submerged Pipe When Exposed (CT 5.1, 5.2, and 5.3) (5 Hours)

Trainee \$20 **ISBN 978-0-13-038279-5**
 Instructor \$20 **ISBN 978-0-13-038289-4**

(Module ID 61105-02) Identifies types of pipe coatings. Describes the different causes of coating damage, and how to inspect pipe for corrosion and mechanical damage.

Aboveground Pipe Coating and Inspection

(CT 7.1, 7.2, 7.3, 7.5, 13.1 and 13.2) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038270-2**
 Instructor \$20 **ISBN 978-0-13-038280-1**

(Module ID 61106-02) Describes aboveground pipe coating types and the causes of coating damage. Describes how to visually inspect aboveground pipe. Explains how to perform surface preparation and coating application for aboveground pipe.

Apply and Repair External Coatings on Buried and Submerged Pipe (CT 13.1 and 13.4) (10 Hours)

Trainee \$20 **ISBN 978-0-13-038281-8**
 Instructor \$20 **ISBN 978-0-13-038291-7**

(Module ID 61107-02) Identifies desired qualities of buried pipe coatings. Explains surface preparation and coating application for buried/submerged pipe. Describes how to perform field coating repairs.

Cathodic Protection Measurement

(CT 1.1, 1.5, 3.1, and 3.2) (7.5 Hours)

Trainee \$20 **ISBN 978-0-13-038283-2**
 Instructor \$20 **ISBN 978-0-13-038292-4**

(Module ID 61108-02) Explains the basic theory of cathodic protection and the methods used to provide protection. Describes the instrumentation and meters used in cathodic protection. Discusses half cell inspection and measuring structure to soil potential.

Test Station Repair (CT 2.1, 2.2, 2.3, and 2.4)

(5 Hours)

Trainee \$20 **ISBN 978-0-13-038284-9**
 Instructor \$20 **ISBN 978-0-13-038293-1**

(Module ID 61109-02) Discusses the types and construction of test stations. Describes how to repair aboveground and belowground test stations. Explains the methods used to attach test station wires to pipe.

Inspect Internal Pipe Surfaces (CT 12) (7.5 Hours)

Trainee \$20 **ISBN 978-0-13-038285-6**
 Instructor \$20 **ISBN 978-0-13-038294-8**

(Module ID 61110-02) Explains how to use ultrasonic gauges to check pipe wall thickness and pit gauges to check pit dimensions. Discusses how to establish pipe orientation and document the findings from wall thickness and pit dimension checks.

Internal Corrosion Control (CT 10.1, 10.2, and 11)

(7.5 Hours)

Trainee \$20 **ISBN 978-0-13-038286-3**
 Instructor \$20 **ISBN 978-0-13-038295-5**

(Module ID 61111-02) Explains how corrosion monitoring probes operate and the information that is collected. Describes how to use corrosion measurement tools and accurately record the measurements obtained.

L2 PIPELINE CORROSION CONTROL

LEVEL 2

Curriculum Notes

- 120 Hours
- Published: 2002
- Instructor's Guide includes access code to download TestGen software, module exams, and performance profiles from www.nccerirc.com.

PAPERBACK

ISBN

Trainee Guide: \$100 **978-0-13-046686-0**
 Instructor's Guide: \$100 **978-0-13-046687-7**

MODULES

All of the modules listed below are included in the Trainee and Instructor Guide(s) listed above. The following ISBN and pricing information is for ordering individual modules only.

Install Cathodic Protection Systems

(CT 9.2, 9.3, and 9.4) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038296-2**
 Instructor \$20 **ISBN 978-0-13-038302-0**

(Module ID 61201-02) Describes requirements for planning a CP system. Explains how to select components, and describes installation techniques for galvanic and impressed current systems. Also covers rectifier installation.

Maintain and Repair Rectifiers (CT 4) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038297-9**
 Instructor \$20 **ISBN 978-0-13-038303-7**

(Module ID 61202-02) Describes the characteristics of CP rectifiers and the functions of rectifier components. Describes troubleshooting techniques for rectifiers and bonds, as well as repair and adjustment procedures for rectifiers.

Mitigate Interference (CT 1.3 and 9.1) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038298-6**
 Instructor \$20 **ISBN 978-0-13-038304-4**

(Module ID 61203-02) Identifies the sources of interference current in a CP system, including causes and testing. Describes mitigation and reduction techniques for a CP system, including bonds, coating, galvanic anodes, and electrical shields.

Test and Repair Shorted Casings (CT 9.5)

(15 Hours)

Trainee \$20 **ISBN 978-0-13-038299-3**
 Instructor \$20 **ISBN 978-0-13-038305-1**

(Module ID 61204-02) Describes testing casings. Explains causes of shorted casings, how to recognize them, and tests for shorted casing conditions. Covers the repair of shorted casings, including replacing components.

Conduct Close Interval Survey (CT 1.2 and 1.4)

(15 Hours)

Trainee \$20 **ISBN 978-0-13-038301-3**
 Instructor \$20 **ISBN 978-0-13-038306-8**

(Module ID 61205-02) Identifies close interval survey equipment, including test lead reels, current interrupters, and data logger and reference electrodes. Describes continuous and interrupted close interval survey methods and the procedure for performing such a survey.

Perform Coating Inspection (CT 7.7) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038248-1**
 Instructor \$20 **ISBN 978-0-13-038255-9**

(Module ID 61206-02) Describes required pre-inspection activities, including surface preparation, degree of cleanliness, profile, and coating mixing, thickness, adhesion, and curing. Describes holiday and pinhole testing and causes of coating failures, including application problems, specifications, and diagnosis.

Perform High-Pressure Blasting/Surface

Preparation (CT 7.4 and 13.3) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038249-8**
 Instructor \$20 **ISBN 978-0-13-038256-6**

(Module ID 61207-02) Explains basic abrasive blast system equipment and describes the characteristics of blast cleaning media. Describes preparation standards, including profiling and inspections. Also covers chemical strippers.

Apply Coatings Using Spray Applications

(CT 7.6 and 13.5) (15 Hours)

Trainee \$20 **ISBN 978-0-13-038250-4**
 Instructor \$20 **ISBN 978-0-13-038269-6**

(Module ID 61208-02) Describes types of paint and coating materials, including pigments, resins, solvents, and additives, including film-forming and generic coatings and powder coatings. Covers surface preparation, application, and testing. Describes air, electrostatic, and thermal spray systems.

