



Pipeline Corrosion Assessment Field Techniques (PCAFT) Exam

Exam Preparation Guide

December 2020

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Introduction

The Pipeline Corrosion Assessment Field Techniques (PCAFT) exam is designed to assess whether a candidate has the requisite knowledge, skills, and abilities (KSA) that a minimally qualified person responsible for implementation or reporting of pipeline inspection activities must possess.

Exam Name	Pipeline Corrosion Assessment Field Techniques (PCAFT) Exam
Time	1.5 Hours (90 minutes)
Number of Questions	50
Format	Live Online Remote Proctoring (Examity*)
Passing Score	Pass or Fail

**Delivered through Examity, NOT AT Pearson Testing Center*

Target Audience

Pipeline Corrosion Assessment Field Techniques (PCAFT) benefits individuals responsible for the implementation or reporting of pipeline inspection activities, including maintenance, service, and technical.

Candidates who may successfully complete the PCAFT course and exam are able to collect data used for the evaluation and monitoring of a pipeline corrosion integrity plan, recognize pipeline anomalies, recommend solutions for resolving technical issues “in the ditch,” evaluate a pipeline in-service using ECDA and ICDA methods and techniques, recognize problems “in the ditch,” and be able to collect the data necessary for further engineering evaluation.

Requirements

Requirements for Pipeline Corrosion Assessment Field Techniques

Prerequisites
<ul style="list-style-type: none">• None required for course
Core Course Requirements
<ul style="list-style-type: none">• Cathodic Protection 1 – Tester• Coatings in Conjunction with Cathodic Protection• CIP Level 2• Knowledge of the corrosion cell (all recommended, not required)
Core Exam Requirements
<ul style="list-style-type: none">• Pipeline Corrosion Assessment Field Techniques (PCAFT) Exam
Application Requirements
<ul style="list-style-type: none">• None required

Exam Body of Knowledge

NOTE: At the end of the exam, the candidate will receive a chart with strengths and weaknesses that correspond to the Domains listed below. You will have the option to email or print it.

1. INTRODUCTION TO CORROSION THEORY

- 1.1 Corrosion Cell
- 1.2 Thermodynamics of Corrosion
- 1.3 Kinetics of Corrosion
- 1.4 Forms of Corrosion
- 1.5 Causes of Corrosion

2. PIPELINE MECHANICAL INTEGRITY ASSESSMENT METHODOLOGIES

- 2.1 Pipeline Mechanical Integrity Assessment Tools and Methodologies
- 2.2 Pressure Testing
- 2.3 In-Line Inspection

3. DIRECT ASSESSMENT METHODS FOR PIPELINE INTEGRITY

- 3.1 Direct Assessment

4. EXTERNAL CORROSION AND STRESS CORROSION CRACKING IN-DIRECT INSPECTION

- 4.1 Introduction
- 4.2 Aboveground Surveys

5. INDIRECT INSPECTION FIELD TECHNIQUES FOR INTERNAL CORROSION

- 5.1 Internal Corrosion Direct Assessment Indirect Inspection Field Techniques
- 5.2 Types of Field Surveys

6. DIRECT EXAMINATION

- 6.1 Preliminary Data for Direct Examinations
- 6.2 Pipe Excavation for Direct Examinations
- 6.3 Conducting Direct Examinations for ECDA

7. SAFETY

- 7.1 What is Safety and Why Does It Matter?
- 7.2 Hazards Assessment
- 7.3 Safety Considerations During In-Line Inspections
- 7.4 Safety Considerations During Hydrostatic Testing
- 7.5 Safety Considerations During Direct Examination

8. DOCUMENTATION

- 8.1 Reporting – Documentation
- 8.2 Typical Field Data to be Documented
- 8.3 Field Data Documentation Sample Forms

Types of Questions

Description of Questions

This open-book exam consists of multiple-choice questions where some questions require one answer and some require more than one answer choice. Questions that require more than one answer will include the note **SELECT ALL THAT APPLY**.

The questions are based on the knowledge and skills required in the pipeline corrosion field assessment techniques industry.

Sample Questions

The sample questions are included to illustrate the formats and types of questions that will be on the exam. Your performance on the sample questions should not be viewed as a predictor of your performance on the actual exam.

1. Which of the following pH levels on a pipeline external surface are associated with stress corrosion cracking (SCC)?

SELECT ALL THAT APPLY

- A. Low
 - B. High
 - C. Near Neutral
2. Where on a pipe may uniform corrosion occur?
 - A. Internal surface only
 - B. External surface only
 - C. Both internal and external surfaces

Answer Key:

1. **B, C**

Reference: PCAFT Course Manual

2. **C**

Reference: PCAFT Course Manual

Preparation

Required Training

NACE Pipeline Corrosion Assessment Field Techniques course

Suggested Study Material

NACE Pipeline Corrosion Assessment Field Techniques Course Manual

Reference Material Provided During Exam

The PCAFT Course Manual is provided in electronic form during the exam.

What to Expect on Test Day

Remote Online Exam Proctoring

** Remote online proctored exams are offered for select exams.*

The NACE Institute has partnered with Examity to offer remote online proctoring for the Pipeline Corrosion Assessment Field Techniques (PCAFT) Exam. With the new Examity platform, you can take the exam from home without arranging for a proctor or traveling to a test site. Please visit this link for information you should know.

<https://naceinstitute.org/certification-resources/online-exam-proctoring>

Examity Demonstration with Automated Proctor

Please visit this link for a demonstration of the computer-based exam. You will have the opportunity to get familiar with how it all works.

<https://vimeo.com/399635210/2eb75207b8>

Computer-Based Exam Tutorial

Please visit this link for a demonstration of the computer-based exam. You will have the opportunity to practice answering a variety of questions to help you get familiar the CBT exam format. You will also receive this tutorial link when you register for the exam:

[NACE Examity Tutorial Video](#)