

Feeling Pressure to Make the Right Career Choice?

Consider Pressure Equipment Integrity Management (PEIM) for Career Pressure Relief

Choosing a career is one of the most important decisions for anyone, but especially for students or young people contemplating their future.

Options is one thing that a career in PEIM has to offer—rewarding and challenging options. Determining how to get there is the next step.

We hope this pamphlet helps you:

- plan your future
- achieve long term success
- gain awareness of this exciting career option.

Where PEIM Professionals Work

Work in an office, in the field, in process facilities, large or small. It's also a lot of fun, if you like variety of work and work environment, technical and engineering challenges, opportunities for advancement.

Manufacturing: pressure piping, pressure vessels, tanks, boilers, structural steel, pipeline components.

Materials engineering/consulting: non-destructive testing, inspection, materials & weld testing, metallurgy, failure investigations

Construction: ensure pressure plants, pipelines and tanks are constructed and erected properly.

Maintenance: plant turnarounds, routine repairs & alterations, emergency repairs.

Owner operators: oil and gas production and processing petrochemical, power generation, pipelines, pulp and paper.

EPC (Engineering - Procurement - Construction): design, quality control, quality assurance.

Teaching: post secondary, seminars, training.

As you gain experience and obtain the various certifications and endorsements, the career and employment options become very diverse, both within local industries and internationally.

What Integrity Professionals Do

Inspecting: new construction, in-service integrity management, repairs and alterations

Testing: materials, welds, pressure equipment, pipelines.

Analyzing: data, risk, cost, options.

Quality control: welding, fabrication, construction, materials, coatings.

Quality assurance: design, manufacturing, construction.

Auditing: all parts of the industry now do internal audits of their own work to confirm suppliers, contractors and operators comply with regulations, codes, specifications and contracts.

Training/teaching: is a satisfying career once you are competent, knowledgeable and possess the organizational and communication skills to be a good instructor, trainer or teacher.

Technology: this is a high tech industry with immense opportunities to learn, develop and apply technology.

Engineering: design, fitness for service..

Regulating: auditing, subject matter experts

Supervising/leading: chief inspector, integrity team leader, supervisor.

Managing: integrity management.

There are also plenty of opportunities for advancement if the technical aspects and challenges are not enough. Many of the skills developed through this experience are very transferable to other industries and opportunities.



Pressure Equipment Integrity Management

Career Opportunities & Path



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Pressure Equipment Integrity Management (PEIM) Career Opportunities and Path



HIGH SCHOOL

Post Secondary Education Typical in PEIM

- Trade/Technician**
 - Welding
 - Power Engineer
 - Pipefitter/Steamfitter
 - Other
- Technical Program (Technologist)**
 - Welding Engineering Technology
 - Materials Engineering Technology
 - Petroleum Engineering Technology
 - Power Engineering Technology
- University Degree**
 - Mechanical Engineering
 - Materials Engineering
 - Chemical Engineering
 - Petroleum Engineering
 - Bachelor of Science
 - Other

Work Experience Typical Prior To Entering PEIM

- In-Service Facilities**
 - Junior Inspector
 - Power Engineer / Operator
 - Pipe / vessel Welder
 - Field / Facilities Engineer

May be in a specific area or industry — experience is very transferable
- Manufacturing - Construction**
 - Welder / Fitter
 - Quality Control
 - Designer / Drafting
- Testing / Examination**
 - Visual Inspection Assistant
 - Materials Lab
- Service / Consulting**
 - Non-Destructive Examination
 - Technician/assistant
- Industries**
 - Oil and Gas Production / Processing
 - Petrochemical
 - Power Generation
 - Pulp and Paper
 - Pipeline
 - Manufacturing
 - Service Co. NDT & Materials
- Engineering / Technical**
 - Facilities
 - Projects
 - Corrosion
 - Process
 - Pipeline

Training That Prepares One for a PEIM Career

- API Inspection Programs**
 - 510 Pressure Equipment
 - 570 Pressure Piping
 - 571 Damage Mechanisms
 - 580 Risk Based Inspection
 - FFS
 - More ...
- National Board**
 - Pressure Equipment (PE) Manufacture and Installation
 - PE Inspection and Repair
 - PSV Inspection
- Materials Engineering & Technology ASM NACE Corrosion Courses**
 - Corrosion Technician
 - Corrosion Technologist
 - Corrosion Specialist
 - Coatings Technology
 - Cathodic Protection
- Administrative**
 - Technical Writing
 - Computer Programs
 - Business Processes
 - Business
- Corrosion Courses**
 - Corrosion Technician (2)
 - Corrosion Technologist (3)
 - Corrosion Specialist+
 - ASME New & Post Construction Codes
- Specialty**
 - Root Cause Analysis
 - Failure Analysis
 - Finite Element Analysis
 - Fitness for Service / Remaining Life Assessment

Certifications Often Required or Desirable

- Industry Organizations Inspection:**
 - API 510 / 570 / 653
 - NBIC
- Examination / Testing**
 - CGSB/ASNT
 - Ultrasonic
 - Radiography
 - Magnetic Particle / Liquid Penetrant
- Jurisdictional Certifications (ABSA/TSASK)**
 - IPVI/IBPVI
 - Welding Examiner
- Professional Designations**
 - Engineer
 - Technologist
 - Technician

Potential Careers

- Integrity Engineering Technologist
- Quality Assurance Specialist
- Quality Control Specialist / Manager
- NDT Specialist / Technician
- Auditor (compliance / quality)
- Regulator/ Regulatory Specialist
- Pipeline Integrity Specialist

In-Service Pressure Equipment:

- Inspection of in-service equipment, piping, tanks
- Integrity Management
- Corrosion Mitigation / Monitoring
- Materials Selection
- Failure Investigation -Failure Avoidance / Prevention
- Repairs / Alterations / Replacement

Technical & Engineering:

- Materials Selection / Design
- Failure Analysis Process
- Corrosion and Damage Monitoring and Mitigation
- Chemicals, Research, Advanced Coatings
- Process Safety Management

Manufacturing / Construction / Maintenance:

- Quality Control
- Welding Technology -Quality
- Welder Qualification Testing
- Quality Assurance

Other Related:

- Regulator Inspector
- Pipeline Integrity Management
- Document Management
- Budget Development and Management
- Teaching / Training

Continuous Learning is Critical for Success in PEIM

- Special courses at institutions: SAIT / NAIT / U of A / U of C / UBC / U of S
- Seminars by industry groups or consultants
- Employer Training Programs
- Certification Renewals
- Varied Work Experience -job change -special assignments
- Published Papers
- Industry Group Participation
- Conferences

Continuous Learning