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

This pamphlet was developed to assist you:
• in planning your future
• gaining awareness of the exciting career opportunities available
• achieving long term success in the industry.

What Is Pressure Equipment?
The world is full of pressure equipment—from the hot water tank in your basement, the power boilers that produce electricity for cities, to refineries and petrochemical and processing plants. We are surrounded by pressure equipment every day, and there are many careers involved in assuring this pressure equipment is safe and operates reliably.

Where PEIM Professionals Work
Work in an office, in the field, in process facilities, large or small. If you enjoy challenges in the technical and engineering fields, countless opportunities for advancement are at hand.

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

Materials engineering/consulting: non-destructive examinations, materials & weld testing, metallurgy, failure analysis.

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

Maintenance: plant turnaround planning, routine repair and alteration development.

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

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

Teaching: post secondary, seminars, and industry training.

As you gain experience and obtain the various certifications and endorsements required, the career and employment options are very diverse and rewarding, both within local industries and international jurisdictions.

What Integrity Professionals Do

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

Testing: materials, welds, pressure equipment and pipelines.

Analyzing: data, risks, costing and assessments.

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

Quality assurance: manufacturing, construction and design.

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

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

Technology: this high tech industry has vast opportunities to learn, develop and apply technology to your chosen field.

Engineering: design, fitness for service and management.

Regulating: inspections, auditing, technical advisory experts and design surveying.

Supervising/leading: chief inspector, integrity team leader and Inspection supervision.

Managing: integrity management programs.

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 fields.
### Pressure Equipment Integrity Management (PEIM) Career Opportunities and Path

**A - Post Secondary Education Typical in PEIM**

<table>
<thead>
<tr>
<th>Level</th>
<th>Program</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Trade/Technician</td>
<td>Welding, Power Engineer, Pipefitter/Steamfitter</td>
</tr>
<tr>
<td>A2</td>
<td>Technical Program (Technologist)</td>
<td>Welding Engineering Technology, Petroleum Engineering Technology, Power Engineering Technology, Chemical Engineering Technology</td>
</tr>
<tr>
<td>A3</td>
<td>University Degree</td>
<td>Mechanical Engineering, Materials Engineering, Chemical Engineering, Petroleum Engineering, Bachelor of Science, Other</td>
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**B - Work Experience Typical Prior To Entering PEIM**

<table>
<thead>
<tr>
<th>Level</th>
<th>Experience</th>
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<tbody>
<tr>
<td>B1</td>
<td>In-Service Facilities</td>
</tr>
<tr>
<td>B2</td>
<td>Manufacturing - Construction</td>
</tr>
<tr>
<td>B3</td>
<td>Testing - Examination</td>
</tr>
<tr>
<td>B4</td>
<td>Service - Consulting</td>
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<tr>
<td>B5</td>
<td>Industries</td>
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**C - Training That Prepares One for a Career in PEIM**

<table>
<thead>
<tr>
<th>Level</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>C1</td>
<td>API Inspection Programs</td>
</tr>
<tr>
<td>C2</td>
<td>National Board</td>
</tr>
<tr>
<td>C3</td>
<td>Materials Engineering &amp; Technology ASM</td>
</tr>
<tr>
<td>C4</td>
<td>Administrative</td>
</tr>
<tr>
<td>C5</td>
<td>Corrosion Courses</td>
</tr>
<tr>
<td>C6</td>
<td>Specialty</td>
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</tbody>
</table>

**D - Certifications Often Required or Desirable**

<table>
<thead>
<tr>
<th>Level</th>
<th>Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>Industry Organizations</td>
</tr>
<tr>
<td>D2</td>
<td>Examination / Testing</td>
</tr>
<tr>
<td>D3</td>
<td>Jurisdictional Certifications</td>
</tr>
<tr>
<td>D4</td>
<td>Professional Designations</td>
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**AA - Potential Careers**

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

**AB - 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

**AD - Technical & Engineering:**

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

**AC - Manufacturing / Construction / Maintenance:**

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

**AE - Other Related:**

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

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**AF - 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