



Operational Excellence Services

Technical Assistance & Training

Training and Competency Management Services



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<https://www.jgc.com/en/business/epc/operation-maintenance/service/>

Training and Competency Management Services

Do you have any of these issues?

- ☹️ **Catch up to the latest technical trends**
- ☹️ **Refresh knowledge on essential technical matters**
- ☹️ **Specific training linked to technical issues**
(e.g., troubleshooting, performance improvement)
- ☹️ **Struggling to fill gap between actual and required skill set**

Training Services

- Organize a tailor-made training program
(e.g., Asset Management, Process Safety Management, TA Management, Plant Life Extension, etc.)
- Deliver training courses and seminars (at site or on-line)
- Implement competency management program
- Dispatch experts to site;
 - for hands-on training
 - for troubleshooting and performance evaluation with follow-up technical sessions



Training and Competency Management Services

Key Categories / Themes for Technical Training

Engineering & Project

P&ID
Hydraulic Design
Process Engineering
Dynamic Simulation Technology
Plant Safety Design and Risk Management
HAZOP
Material Selection
Piping Engineering
Pressure Vessel, Exchangers and Tanks
Energy Efficiency Improvement
Pump and Compressor
Instrument Engineering
Safety Instrumented Systems
Electrical Engineering
Civil Engineering
Welding Technology
Paint Technology
Corrosion under Insulation
Latest Non-Destructive Testing Technology
Vibration Control
Mechanical Handling
Commissioning
Operations Readiness & Assurance

Operation & Maintenance

Process Safety Management
Reliability, Availability, Maintainability (RAM)
Reliability-Centered Maintenance
Risk-Based Inspection
Plant Life Extension Program
Fitness for Service
Simulation Technology for Plant Troubleshooting (CFD)
Turnaround Management
Computerized Maintenance Management System
Computerized Inspection Management System

Our Strengths

- Professional Engineering Experts run our Training Services.
- Training programs are updated in line with latest technical trends and are applicable to actual implementation.
- In association with and funded by Japanese governmental support, such as JCCP (Japan Cooperation Center, Petroleum).
- Continuous follow-up and support are provided by our overseas affiliates and local partners.

Our Experiences

Technical seminars

20+ in past 5 years

Trainees

500+ in past 5 years

Case Study : Customized Training for FCC Unit Reliability Improvement

[Return to
Technical Assistance
& Training menu](#) 

Background:

A refinery in Southeast Asia was struggling with stable operation of RFCC unit from the start after EPC project

Attendees:

Maintenance and inspection departments and technical service departments at the plant site and headquarters

Objective:

To share information on various problems that occur in RFCC, analysis methods to solve them, and technical advice from refractory vendors.

Workshops are also held to share examples of problems encountered in their RFCC and to discuss how to plan the next turnaround maintenance.

Reference Services

Process Safety Management Seminar - JGC Headquarter 2016 for E&P Company in Japan

Plant Life Cycle Management Seminar - JGC Headquarter 2017 for E&P Company in Japan

Process Safety Management Seminar - Online 2021 for E&P Company in Japan

FCC Unit Integrity & Reliability Improvement Seminar– Online 2022 for Refinery in Middle East

FCC Unit Integrity & Reliability Improvement Seminar– Online 2023 for a Refinery in Southeast Asia

O&M Engineering Training – JGC Headquarter 2023 for a Petrochemical Plant in Middle East

Examples of customized training programs

Material Degradation and Remaining Life Assessment (Day 1)

1. FCC Unit Process Overview
2. Material Selection and Degradation
3. Remaining Life Assessment Methodologies
4. Experience of Material Degradation and Current Issue (by Client)

Corrosion Management and Inspection Data Management (Day 2)

1. Corrosion Management Program
2. Corrosion Under Insulation
3. Inspection Data Management System
4. Corrosion Management Program and Improvement Plan (by Client)
5. Workshop - Corrosion Management Program (All members)

Fitness for Service and Major Replacement Work (Day 3)

1. Fitness for Service Technology
2. Major Replacement Work
3. Advanced Repair Technology
4. Past Experiences and Future Plans (by Client)
5. Workshop – Major Replacement and Repair Planning and Execution (All members)

Reliability of Critical Mechanical Components (Day 4)

1. Refractory (Vendor)
2. Expansion Joint (Vendor)
3. GRP Piping
4. Future Actions and Wrap Up (All members)