

## GGL Cryogenic Process

### General Objectives:

The aim of this subject is to provide participants with supporting knowledge of typical cryogenic processes.

### Specific Objectives:

At the end of training the trainees will be able:

- ✓ To understand different gas cooling methods: Heat exchange, turbo-expander, Jules-Thompson effect, refrigeration;
- ✓ To understand how to separate natural gas components using distillation columns;
- ✓ To understand hydrate formation causes and how to prevent it;
- ✓ To develop troubleshooting and cause & effect analysis;
- ✓ To understand the concept of cause and effects analysis.

### Audience:

Operators and foremen with at least 1 year experience on production facilities.

**Workload:** 40 hours

### CONTENTS:

**Module I – Fas liquefying process**

**Module II – Gas components separation**

**Module III – Hydrates prevention**

**Module IV – Dew Point Analysers**

**Module V – On Line Gas Chromatographs operation**

**Module VI – Troubleshooting**

**Module VII – LPG quality**