# Training - Introduction to hydrogen compression

INTCOHY-EN-P | Face-to-face only | 2,5 days

This course gives the key points of hydrogen compression and compressors operation, no matter the use (hydrogen production, transportation, storage, end use)

## Level

Awareness

## Public

Engineering staff involved in hydrogen compression

## Objectives

Attendees will be able to implement the following skills:

- Explain the influence of operating parameters on compressor performance taking into account the physical phenomena related to compression and a change in gas nature
- List the components of each compressor type and their importance to machine selection and sizing

## Pedagogical & technical resources

- Interactive lecture
- Use of actual machine parts and open machines
- Study of actual drawings, cutaways, PIDs...

## Assessment of achievements

Quiz

## Prerequisites

No prerequisites are necessary to follow this course

## Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

# Program

### COMPRESSORS TECHNOLOGY — 1 day

Hydrogen compression: compressors types. Practical implementation through a given process.
Technology: Casing, stationary and rotating parts, according to the machine type.
Auxiliaries: lube oil, sealing,... according to the machine type.
Safety devices: vibrations, bearings/thrust bearing temperatures, oil pressure... according to the machine type.
Natural gas compressor technology vs hydrogen one.
Demonstrations: study of actual parts and open machines.

### COMPRESSORS PERFORMANCES — 1 day

Gas Compression: key points. Natural gas compression vs hydrogen compression.
Compression mechanism through a compression stage, according to the machine type.
Operating limits, according to the machine type: discharge temperature, surge, maximum pressure...


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Performance vs operating conditions: pressure ratio, suction conditions, rotation speed...
Vibrations, critical speeds.

## COMPRESSORS OPERATION AND SURVEY — 0.5 day

Flow control.
Case study: flow control vs various operating conditions.
Start-up and shutdown. Associated risks.
Compressor survey key points.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com


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