
CO3 COMBUSTION SCHOOL

CO3 is a professional Oil & Gas Service provider specialized in Combustion. CO3 aims to be the leader of Training Courses for Oil & Gas Organizations focused to excellence.

CO3 is already recognized by the world's most important Oil & Gas Operator, Contractor and Vendor Companies and provides Basic to Advanced Level Training Courses for Fired Items.

Our offer in terms of Training Courses includes:

- **TRAINING COURSES**

- ***IN-OFFICE & COMBUSTION TEST AREA***

- General Training Courses can be a combination of:

- o Combustion

- Basic CTC101 (8h)
- Intermediate CTC102 (12h, requires CTC101)
- Advanced CTC103 (16h, requires CTC102)

- o Heat Transfer

- Basic HTC101 (4h)
- Intermediate HTC102 (16h, requires HTC101)
- Advanced HCT103 (24h, requires HTC102)

- o Fundamentals on Fired Items

- Fired Heaters FIC111 (16h, requires at least CTC101 and HTC101)
- Reformer Heaters FIC112 (16h, requires at least CTC101 and HTC101)
- Thermal Oxidizers FIC 113 (16h, requires at least CTC101)
- Flares FIC114 (16h, requires at least CTC101)
- Boilers FIC115 (16h, requires at least CTC101 and HTC101)
- Burners FIC116 (16h, requires at least CTC101)

- o Operation & Maintenance of Fired Items

- Fired Heaters OMC111 (16h, requires FIC111)
- Reformer Heaters OMC112 (16h, requires FIC112)
- Thermal Oxidizers OMC113 (16h, requires FIC113)
- Flares OMC114 (16h, requires FIC114)
- Boilers OMC115 (16h, requires FIC115)
- Burners OMC116 (16h, requires FIC116)

- o Instrumentation applied to Fired Items

- Basic ICC121 (8h)
- Advanced ICC122 (16h)

- o Detection & Prevention of Combustion Hazards on Fired Items

- Basic DPC191 (8h)
- Advanced DPC192 (16h)

- **COMBUSTION TEST AREA**

The Combustion Test Area, located in Northern Italy, is the best way to **learn from real flames in a friendly and safe environment**.

All the Intermediate and Advanced Training Courses and the Tailor-Made Training Courses (upon request) include the use of the Combustion Test Area.

The major activities in the Combustion Test Area are:

- HSE Briefing before entering the Area
- PPE's supplied by CO3
- Operation and Training and Set-Ups of real instrumentation based on the instruments installed in Oil & Gas plants, such as:
 - Combustion Ignitors
 - Flame Detectors
 - Thermocouples
 - Oxygen and Flue Gas Analyzers
- Install & Disassembly and check each component of a real:
 - Process Burner
 - Pilot Burner
- How to make a Spark Test and Flame Test
- Monitor real Flames – FG, FO, Combined
 - Explanation for different sizes, behaviors, colours
- Make real Measurements – FO, FG, Comb. Air
 - Temperature, Pressure, Flow Rate
- Detect & Evaluate real Flue Gases – NO_x, CO, O₂
 - How to reduce pollutants and best combustion set-ups for operation
- Simulations of issues and Troubleshooting:
 - Pilot Burner Ignition
 - Pilot Burner flame behaviour
 - Pilot Burner flame detection
 - Process Burner ignition
 - Process Burner flame behaviour
 - Process Burner flame detection

- **TAILOR-MADE TRAINING COURSES**

IN-OFFICE & COMBUSTION TEST AREA and/or ON-SITE

- Tailor-Made Training Courses are **prepared based on your specific requirements** and are focused on a combination of:

- Process
- Operation & Control
- Maintenance
- Mechanics
- Instrumentation
- Automation

Tailor-Made Training Courses are mainly held On-Site and they are addressed to :

- Commissioning & Start-Up Engineers & Technicians
- Operation Engineers & Technicians
- Maintenance Engineers & Technicians

- **TRAINING COURSE LOCATIONS**

- **On-Site:** Training Courses held directly to your Plant, based on your specific requirements
- **In-Office:** Training Courses held at our CO3 Training Centers in Northern Italy or at, your request, directly at your own Offices
- **Combustion Test Area:** Training Courses held in the Combustion Test Area in Northern Italy

In case of Training Courses in Italy, CO3 provides assistance on logistics in order to ease the Visa process and accommodation of our Estimated Guest Companies.

- **TRAINING COURSE DURATION**

The Training Courses duration depends on the Training Course Level and subject.

In general, the duration of the Training Course is (for details, please refer to the Training Course list above):

- **Basic: 8 hours** – 1 day in Classroom
- **Intermediate: 16 hours** – 1 day in Classroom + 1 day in the Combustion Test Area
- **Advanced: 16 or 24 hours** – 1 day in Classroom + 2 days in the Combustion Test Area

For Tailor-Made Training Courses duration is based on your specific requirements.

- **TRAINERS**

CO3's Trainers are fully specialized in Combustion and Heat Transfer.

Each CO3 Trainer has more than 10,000 hours of On-Site experience in the specific field of the trained topic.

- **FINAL TEST & COMPLETION CERTIFICATE**

At the end of the Training Courses a Completion Certificate is issued upon passing the Final Test

In case of longer Training Courses (two weeks or more), a Weekly Test will be held every week, and discussed and corrected the following day

All the Training Courses are in English or Italian language.

Contacts

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