Theoretical Course
UNIC Controlled X-Engines (3-Days)

Valid for the Following X-Engines

- X35
- X40
- X52
- X62
- X72

Target Group

This theoretical training is aimed for marine engineers and technical staff who are involved directly or indirectly in operation and supervision of the above listed WinGD X-Engine type(s). This is taking into consideration the common engine control system UNIC for the appropriate bore segment(s).

Prerequisites

Applicants should demonstrate theoretical knowledge of two-stroke low-speed diesel engines and have certain operational experience on RT-series or similar conventional or common rail engines.

Objective of the Training Course

Participants will learn WinGD's electronically controlled engine features and deepen their knowledge on engine components and functionality of all engine systems.

Particular focus is put on the engine control system, UNIC, for the X-Engines and the integration into the vital engine systems (i.e. fuel injection, servo oil and cylinder lubrication, etc.)

Course Location

By default, training courses are offered at one of the WinGD Training Centres.
Upon request, the course can also be delivered in alternative locations, these include WinGD training partners, ship owners and/or crewing agency premises or even on-board ship. In such cases the content of the course will not differ from courses offered at WinGD Training Centres.

Duration of Training Course

Three (3) working days

Content of the Course

- Introduction to the common rail technology
- RT-flex and X-Engine design
- Mechanical flex components
- Hydraulic and pneumatic systems
- FlexLub cylinder lubrication system
- UNIC engine control system

Course Program

Times may be subject to individual needs. Coffee breaks between lectures will be decided by the trainer.

Day 1

Course Introduction

- A short presentation of the course content, safety rules and registration of participants will be outlined.

Rt-flex Concept Design

- Introduction to the common rail technology.
- Comparison of RT-series conventional engines with RT-flex / electronically controlled X-Engines.

Mechanical Flex Components

- Rail unit design and parts
- Exhaust valve and valve drive system
- Injection control system / flow limiting valve
- Supply unit design and parts (fuel & servo oil pumps)
- Crank angle sensing unit

Day 2

Hydraulic and Pneumatic Systems

- Fuel system
- Lubricating oil system
- Servo oil system
- Compressed air system (starting and control air)

Cylinder Lubrication System

- System layout and interface with UNIC

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Day 3

UNIC Engine Control System

- Control system functionality and interface with propulsion control system
- Hardware modules (CCM, MCM, IOM, power supply system)
- Local Display Unit (LDU)
- Crank angle detection system
- Injection control
- Exhaust valve control
- Fuel and servo oil common rail pressure control
- Starting air valve control

Course Evaluation and Closing

Online Training

In case of online training, participants will receive an invitation to the training addressed to their email address provided upon registration on the WinGD Training Administrative Platform.
The training content will be adapted according the situation, i.e. hands on sessions are not possible and simulator training will be implemented if available.

Course Availability, Price and Registration

For course availability, price and registration, please visit:
https://training.wingd.com/trainings/
At commencement of training, each participant will receive handouts in electronic form (PDF format).

Please note that depending on location, different conditions will apply.

Trainings at WinGD Training Centres:

Included:

- Lunch, coffee/tea and water during breaks.
- Daily transport between hotel and training centres.
- Hotel accommodation can be reserved on your behalf upon request at WinGD selected hotels in the vicinity of the training centres.

Excluded:

- Costs for accommodation.
- All travel/extra costs, incl. transport to/from airport.

Trainings at WinGD Training Partners:

Conditions at Training Partner Training Centres may differ and need to be confirmed directly.

On Site Trainings:

Local arrangements listed above included/excluded will differ for on-site/on-board trainings and will be according prior agreement.

Training Material and Tuition Language

English is the basic tuition and training material language.
Other tuition languages may be available upon request at certain locations, with the prior confirmation from WinGD.

Cancellation Policy

There is no cancellation fee for individual or group bookings if WinGD receives notification of non-attendance fourteen (14) or more calendar days before the course start date.

There is a fifty per cent (50%) of course price cancellation fee for individual or group bookings if WinGD receives a non-attendance notification between fourteen (14) and seven (7) calendar days before the course start date.

There is a one hundred per cent (100%) of full course price cancellation fee for individual or group bookings if WinGD receives a non-attendance notification less than seven (7) calendar days before the course start date.

Certification of Instructor

Training is conducted by an instructor, who is certified according IMO model course 6.09 (Train the Trainer) and IMO model course 3.12 (Maritime Assessor Course / STCW 95).

Contact

For training inquires and training registration, please contact us via training@wingd.com or visit our training homepage

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