

ABB Marine Academy course description

H914 – Turbocharging Senior for Technical Staff

Course goal

This training is targeted to end users who have to operate TPL platform turbochargers. Attention is given to basic maintenance and monitoring in operation, as well as cartridge concept. A workshop session will teach how to disassembly and reassembly a cartridge group.

Additionally, this course has the target to widen the knowledge about turbocharging behavior upon different influencing factors and how the operational limits of the turbochargers are set.

Learning objectives

Upon completion of this course, the participants will have an understanding of turbocharging basics and TPL installations on four stroke diesel marine applications, with reference to operation and first level maintenance.

Understanding of turbocharging basics on four stroke diesel marine applications, with reference to interaction between engine and turbocharger, design criteria and operational influencing parameters will be provided.

Contents

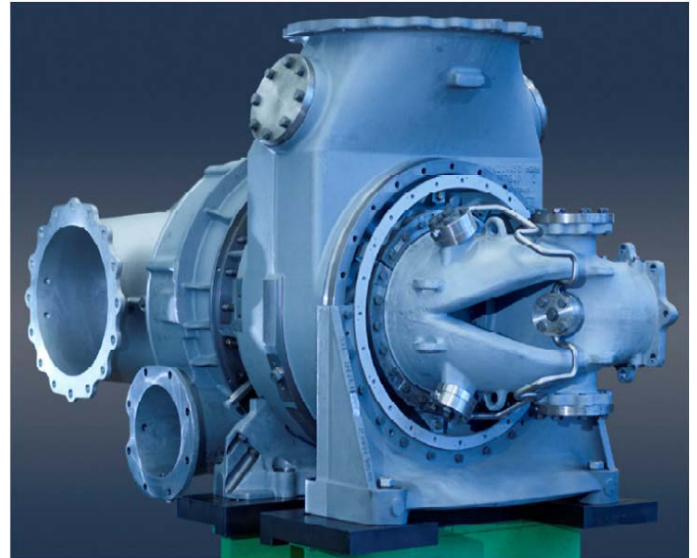
- Turbocharging principles
- TPL- A/C service concept
- TPL- A/C Monitoring in operation
- TPL- A/C Cleaning in operation
- Turbocharger cartridge concepts
- TPL- A/C Disassembly and assembly (workshop session)
- Main dimensions and measurements, tightening torques
- Interaction between engine and turbocharger
- Influence of ambient conditions on turbocharger
- Surging
- HFO operation
- Loads on turbocharger components
- Rating plate and design criteria (SIKO)

Methods

Classroom lectures and workshop session

Level

Basic-Intermediate



Student profile

Marine Engineers and Superintendents

Prerequisites

None

Duration

4 days

Venue

Genova (Italy)
Singapore

Additional information

Minimum 6, maximum 8 participants.

PPE (Safety Shoes) are required to enter the workshop.

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Course outline

Day 1

Course introduction
Turbocharging principles, HFO operation
Influence of ambient condition on turbocharger
Cleaning in operation, loads on turbocharger components

Day 2

Workshop session overview
Workshop session
Cartridge disassembly and reassembly
Questions and discussion

Day 3

Rating Plate e design criteria
Interaction between engine and turbocharger, Surging
Use of not-OEM parts
Upgrades and retrofits

Day 4

Review of days 1-3
New turbochargers generations
Examination
Feedback Forms