MAN Diesel



### Dear Customer

The MAN Diesel PrimeServ Academies are pleased to present to you our new course catalogue for 2010. In this catalogue you will find all training courses offered by our training network in 2010 regarding the operation and maintenance of our engines and turbochargers.

During the course of last year, we had some important milestones to declare. In March we opened our first PrimeServ Academy in Saint Nazaire, France and in December we opened our first regional PrimeServ Academy for the American market in Fort Lauderdale, Florida, USA.

Our second regional PrimeServ Academy for the Asian market will follow with an opening in March 2010 in Pusan, Korea. Thereby we will increase our global presence to offer you training solutions wherever you need them. We will of course maintain and apply the same high quality standards for our newest members in the training network as we do in our PrimeServ Academies at our home organisations in Europe.

Please take a few minutes and look through our course catalogue, you will find a profound variety of training courses for basic and advanced target groups as well as customized solutions which can also be performed at your power plants or on board your vessels.

We are wishing you a successful year 2010.

Yours faithfully

Sorgen Lader AML

Joergen P. Nielsen Senior Manager Head of Technical Service PrimeServ Holeby

Joern Naess Superintendent PrimeServ Academy

#### Enclosure

#### MAN Diesel

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MAN Diesel

#### MAN Diesel

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MAN Diesel - a member of the MAN Group

### Action code: When convenient

### New Course Catalogue of MAN Diesel PrimeServ Academies

January 2010 SL10-518/JGN

#### Concerns

Owners and Operators of MAN Four-stroke Diesel Engines Type All. 1

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# **Courses 2010** MAN PrimeServ Academies

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# **1** Introduction



In our PrimeServ Academies both customer personnel and our own staff receive upto-date training. A know-how-transfer only the OEM can provide. This ensures that during operation and maintenance, everything is carried out correctly and efficiently.

A prerequisite for optimising the performance of a plant and safeguarding customer's investment.

In addition, the MAN PrimeServ network promotes a constant and direct transfer of knowledge among customers, suppliers and our research and development functions. This helps us to continuously increase our market orientation and our customers' satisfaction with our performance. The PrimeServ Academy is a part of the After-Sales business unit MAN PrimeServ.

# 2 Low Speed Two-Stroke

The constant, rapid development of ship's machinery, combined with the reduction in manning, means that it is vital for operating engineers to supplement their practical experience with regular theoretical updates. For this reason MAN Diesel & Turbo offers a worldwide engineer qualification. Courses comprise details on design, operation and maintenance.



# 2.1 MC Engine Courses

The main goal of the training course is to cover the whole range of MAN B&W brand MC and MC-C engines. We aim to give a clear overview of these conventional engines as well as explaining details of design, operational functions and maintenance.

Throughout the course, instructors from the MAN Prime-Serv Academy will use service experience to illustrate problems and solutions. We take a practical approach without being an actual interactive course.

A basic knowledge in Two-Stroke engines is an advantage for the participants.

#### **Course Contents**

- Introduction to MC and MC-C Engines
   General description of MAN B&W Two-Stroke S/L/K
   MC and S/K MC-C engines.
- Main, Connecting and Crosshead Bearings
   Design and Service Experience are explained as
   well as inspection methods and criteria.
- Cylinder Conditions and influences

Lubrication and feed rate. Inspections through scavenge ports and practical information for evaluation. Description of different reasons for abnormal cylinder condition.

Fuel Injection System

Design and Operation of the fuel injection system.

Exhaust Valves

Design and actuation system factors influencing the life span.

Chain Drive

Design and adjustment of the chains. Design and adjustment of chaindesign and the top bracing.

- Manoeuvering System and Pneumatic System
   Design and function of the start, stop and reversing mechanisms.
- Performance

Evaluation of Performance readings. Layout and load diagrams.

Maintenance

Overhaul procedures and tools supplemented by service experience.

### **Further details**

MC also in combination with Two-Stroke combined classes.

## 2.2 ME Engine Courses

The ME course is a 5 day session, covering the concept and operation of the MAN B&W Electronic controlled engine as well as a tour inside the new mechanical designs and hydraulic principles.

The aim of the ME course is to provide confidence in operation of- and identifying problems on, all MAN B&W ME-Engines.

The course is built up around theoretical interactive discussions in combination with practical training sessions, working with the MAN B&W ME Engine Simulator.

Practical training is focused on daily engine operation, adjustments and troubleshooting in the electronic parts of the system.

Theoretical training is conducted by MAN Prime-Serv Instructors, working as supervisors during the practical parts, where exercises are solved by the course participants.

Furthermore this course is taking basic steps into Pressure Monitoring Indication and Computer Controlled Surveillance Engine Diagnostic System CoCoS EDS management, bringing extra focus on the additional applications, which are working together with the ME Concept.

The ME-Engine course has been certified in accordance with DNV Standard for Certification of Learning Programmes.



### **Course Contents**

- Introduction to the ME engine
   An overview of the ME engine, and details on where it differs from the well known MC engine.
- Hydraulic Power Supply (HPS)
   Detailed description of the hydraulic power

Detailed description of the hydraulic power supply system, including filter, pumps and valves.

#### Hydraulic Cylinder Unit, (HCU)

Detailed description of the hydraulic system on the cylinder units, including fuel system, and cylinder lubricating system, as well as valves used during maintenance procedures.

#### Engine Control System

Detailed description of the electronic engine control system, hardware and functionality followed by practical exercises. Basic description of the related combustion pressure analyser tool (PMI) and the Computer Controlled Surveillance – Engine Diagnosis System (CoCoS-EDS).

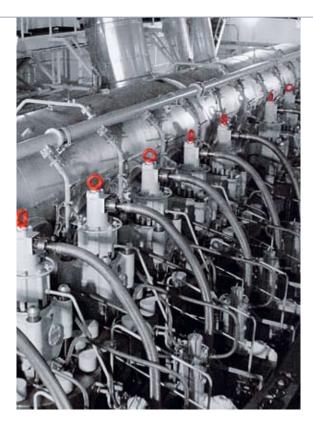
#### Operation

Description of the user interface to the engine, focusing on all the operational features as well as adjustment of engine running parameters and troubleshooting.

### **Further details**

ME also in combination with Two-Stroke combined classes.

# 2.3 ME-B Engine Courses



This 4-day course covers the MAN B&W electronically controlled small bore engine with camshaft operated exhaust valves – the ME-B engine. It concentrates on the electronic and hydraulic control systems. Only mechanical/structural parts differing from MC engine specification are covered, e.g. camshaft, fuel oil pressure booster. Parts shared with the MC engine are covered in our general MC engine training course.

The ME-B engine training course is interactive, alternating between theory and practical exercises. Theory is explained by instructors from the MAN PrimeServ Academy. Practical exercises are performed by course participants under instructor supervision. The exercises are a follow-up to the theoretical part to emphasise certain aspects and focus on engine operation, adjustments and real life troubleshooting in the electronic part of the system.

### **Course Contents**

### Introduction to the ME-B Engine

An overview of the ME-B engine, and details on where it differs from the well known MC engine.

#### Hydraulic Power Supply (HPS)

Detailed description of the hydraulic power supply system, including filter, pumps and valves.

#### Dual Hydraulic Cylinder Unit

Detailed description of the hydraulic system at the cylinder units, including fuel and cylinder lubricating systems, as well as valves used during maintenance procedures.

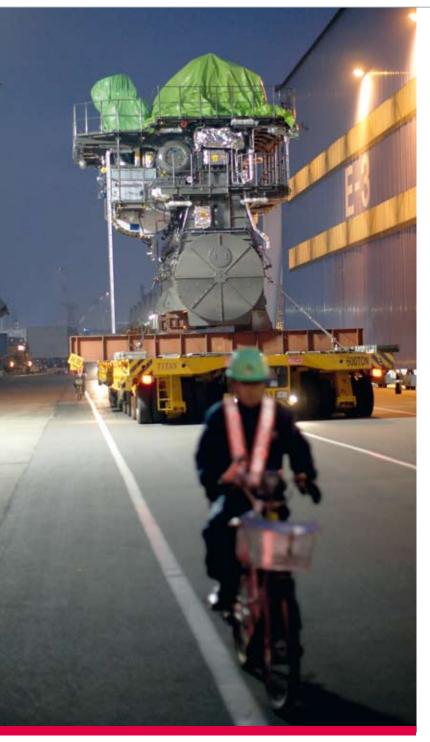
#### Engine Control System

Detailed description of the electronic engine control system, hardware and functionality followed by practical exercises. Basic description of the related combustion pressure analyser tool (PMI) and the Computer Controlled Surveillance – Engine Diagnosis System (CoCoS-EDS).

#### Operation

Description of the user interface to the engine, focusing on all the operational features as well as adjustment of engine running parameters and troubleshooting tools, followed by practical exercises.

# 2.4 ME Electrical Course



### 2.4 ME Electrical Course

The aim of this theoretical course is to give the Electrician on vessels powered by ME engines the knowledge and skills to maintain and repair the engine control system and relevant engine components.

### **Course Contents**

- General ME engine knowledge
   A general overview and description of the ME engine and Control system.
- Cabling Knowledge of the cabling on the ME engine.
- Power supply
   Principle and testing.
- Electrical Signals

Understanding the different signal and signal paths. How to use the ME control system in fault finding.

Engine Control System connections
 Connections from ECS to RMS, AMS and Safety Systems.

# 2.5 ME Superintendent Course2.6 Low Speed Combined Course

### 2.5 ME Superintendent Course

The aim of this theoretical course is to give the Superintendant an understanding of the ME engine and enable him/her to advise the vessel's Chief Engineer regarding maintenance and running of a ME engine.

### **Course Contents**

### General ME engine knowledge

A general overview and description of the ME engine and Control system.

Service experience

Known issues regarding the ME engine.

### Engine performance

Factors regarding engine performance ad optimizations.

### CoCoS, EDS and PMI

Introduction of the MAN Computer Controlled Surveillance, Engine Diagnostics System programs and Pressure Monitoring and analysis system.

### Spare parts

MAN-sparepart ordering.

### The future

ME engine developments.

### 2.6 Low Speed Combined Course

The aim of the combined Low speed training courses is to introduce people to the engine system.

This course covers the MC engine, ME engine as well as the Turbocharger attached on engine within a comprehensive two weeks duration.

### **Course Contents**

- MC engine course (1 week duration)
- ME engine course (1 week duration)
- Theory on turbocharger types TCA (1day) and NA (1 day)

### **Further details**

Please revert to MC/ME/Turbocharger description for more details on course content and topics covered! For combined courses a different pricing model applies! Please see course dates!

## **3 Medium Speed Four-Stroke**

Are you operating MAN Diesel & Turbo medium speed engines? Have you hired new staff recently?



Then you might look for an opportunity to develop your employees' skills knowing that this is an investment with rapid payback.

At the PrimeServ Academy, we would like to offer you this opportunity. We are prepared to sustain your business by training staff in operation and maintenance of large bore Four-Stroke Diesel engines and turbochargers mostly operated on heavy fuel oil.

Practical exercises and presentations are included in the courses, updating the maintenance and service knowledge of even your most experienced engineers.

Our Academies offer training on various Medium speed engine types, automation systems and applications.

### Medium speed engine automation

- Alphatronic 2000 LMCS
- Alphatronic 2000 PCS
- SaCoS
- SaCoSone
- Woodward
- Heinzmann
- Regulateurs Europa

### Medium speed engine applications

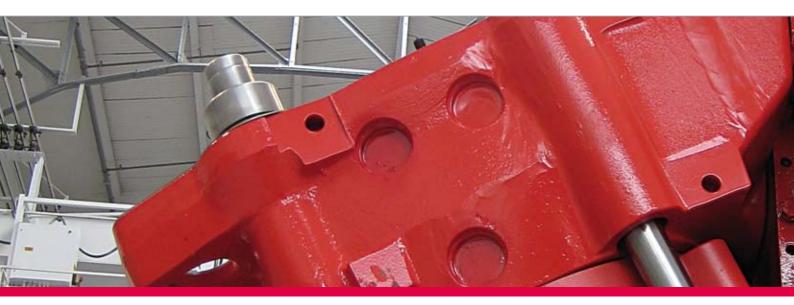
- Propulsion
- Gensets

# Training for the following Medium speed engine types is offered:

- 23/30A
- 28/32A
- 23/30H (and predecessors)
- 28/32H (and predecessors)
- 16/24
- 21/31
- 27/38
- 28/33D
- **32/40CD**
- 32/44CR
- **48/60**
- **58/64**
- 51/60DF
- Mirrlees Blackstone
- CR-system
- Paxman
- Ruston
- Pielstick PA4-200, PA6B
- Pielstick PC2.5/PC2.6B600, PC4.2B

## 3.1 Medium Speed Engine Courses

## 3.1.1 Basic Engine Course



These five day training courses are aimed at marine as well as stationary applications.

Participants with basic knowledge of the diesel engine principle will be introduced to relevant parameters and components of the specific engine type to safely and efficiently operate it.

The training topics are well distributed to cover all aspects of the specific engine type.

- General introduction
- Engine design and engine data
- Safety and special tools
- Handling of manuals and work cards
- Hydraulic tensioning tools
- Running gear maintenance
- Fuel injection system
- Lube oil system
- Pneumatic system
- Engine starting system
- Cooling water system
- Operating data of systems on engine
- Turbocharger basics
- Turbocharger maintenance
- Introduction to Engine Control System
- Operation of Engine Control System
- Operating and maintenance experience
- Identifying minor faults/troubleshooting
- Execution of maintenance tasks defined by MAN Diesel & Turbo instructions

# 3.1.2 Common Rail Injection System Course 3.1.3 Advanced Engine Course

### 3.1.2 Common Rail Injection System Course

This three day training course is aimed at customers operating engines with Common Rail (CR) technology.

# Each Course is divided into modules and will cover the following topics:

- What is Common Rail?
- How does Common Rail work?
- Functional description of MAN Diesel & Turbo Common Rail components
- Engine operation
- SaCoSone engine control system
- Maintenance
- Trouble shooting

For operators of our 48/60 CR engines, we recommend a combination with our 48/60 basic course.

The 32/44 CR basic course already includes the Common Rail module.

### 3.1.3 Advanced Engine Course

These five day training courses are aimed at marine as well as stationary applications.

Participants with professional experience or knowledge gathered at basic courses will enhance their knowledge of the specific engine type to maintain the machinery safely and efficiently.

The training topics are carefully selected to upgrade knowledge on the specific engine type.

- General introduction
- Engine design and engine data
- Safety on the engine
- Execution of maintenance tasks defined by MAN Diesel & Turbo instructions
- Quality requirements of operating media
- Running gear maintenance
- Replacement of engine components
- Overhaul of subassemblies
- Lube oil system and Pneumatic system
- Cooling water system
- Operating data of engine systems
- Turbocharger maintenance
- Sound knowledge of the
- Engine Control System
- Engine Control System Software tools
- Operating and maintenance experience
- Identifying faults and troubleshooting

# **3.1.4 Engine Automation**

# Engine automation is an increasingly important field in Diesel engine design and operation

The requirements of fuel efficient operation and limited emissions values call for state of the art engine control systems.

The PrimeServ Academy offers training for this essential part of the Diesel engine to provide a sound understanding and knowledge of the systems used on the customers application.

Simulators provide the chance to work intensively on these control systems and to get to know all their special features.

- Sensors on the engine
- Introduction to the engine control philosophy of MAN Diesel & Turbo
- Speed governing basics
- Detailed knowledge of governor and actuator
- Introduction to electronic speed governing systems
- Extensive use of governing system software
- Introduction to engine diagnostics
- Troubleshooting



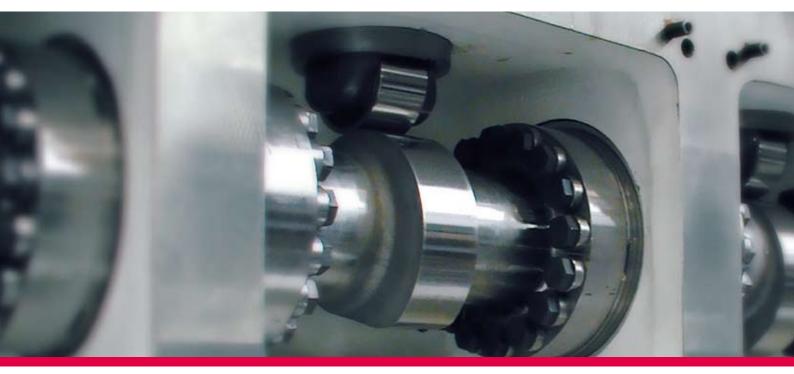
# 3.2 Propulsion / GenSet Courses3.2.1 Basic Propulsion

Performance and service life of the complete propulsion system can be significantly enhanced by improving the skills of the operating personal.

Who will be better doing this training than the manufacturer of the specific product?

The courses cover the design, operation and maintenance of MAN Diesel & Turbo Four-Stroke engines of the types L21/31, 27/38, 23/30A and 28/32A as well as the AMG and AMG-EV types of gearboxes, VB and VBS propellers and Alphatronic 2000 and 2A Remote Control System and engine safety systems.

- General introduction to the specified engine
- Engine frame & Oil pan
- Crankshaft, Flywheel, Turning gear, etc.
- Bearings
- Cylinder Unit
- Camshaft
- Fuel Oil System
- Starting Air System
- Lubrication oil system
- Cooling system
- Turbocharger
- Electrical system
- Oil Mist Detection System
- Splash Oil System
- Operation
- AMG EV Gearbox in general
- VBS-Propeller in general
- Alpha Tronic 2000



## 3.2.2 Basic GenSet

Our basic GenSet course covers the design, operation and maintenance of MAN Diesel & Turbo engines of the types 16/24, 21/31 and 27/38.

On the electronic side these 3 day courses also cover the engine automation system and basic principles, operation and maintenance of the synchronous generator.

These courses are mainly theoretical but closely linked to real components undergoing reconditioning at our Service Center.

### **Course Contents**

- Welcome and introduction
- General introduction to the specific engine type
- Engine frame and Oil pan
- Crankshaft, Flywheel, Turning gear, etc.
- Bearings
- Cylinder Unit
- Camshaft
- Fuel Oil System
- Compressed Air System
- Lubrication oil system
- Cooling system
- Turbocharger
- Electrical system
- Maintenance
- Operation
- Generator basics
- Control & Safety



### **Please note**

Special tailored GenSet training courses can be organized upon request for individual groups at the Academy Holeby and on site.

For special tailored Propulsion training courses please contact our Academy in Frederikshavn.

# 3.2.3 Engine Automation and Remote Control Systems

Our 3 day advanced engine automation and remote control system courses cover both the Alphatronic 2000 LMCS part as well as Alphatronic 2000 PCS.

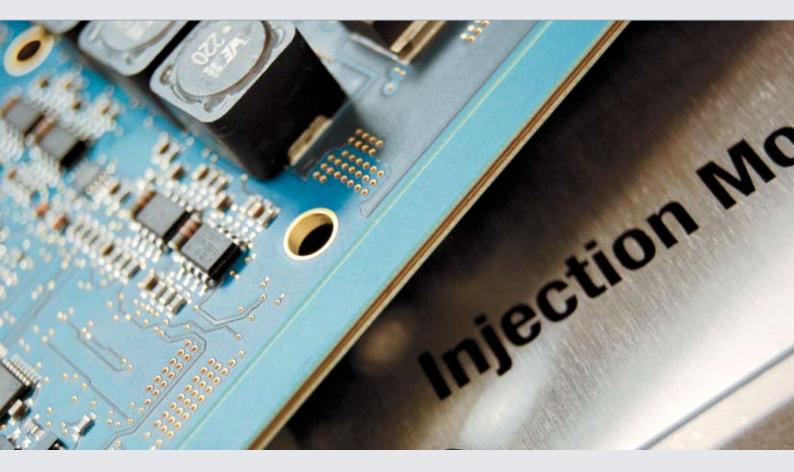
#### Improve your skills in daily operation

Modern Remote Control Systems are complex electronic systems that sometimes can be difficult to comprehend completely. Not only are they complex as a remote control system but other systems like Power Management Systems, Dynamic Positioning Systems, Voyage Data Recorders etc. are often connected making the system even more complex.

#### Know how to trouble shoot

Troubleshooting requires a solid back ground knowledge of the working principles. Without it, trouble shooting is often like working in the dark. During our advanced courses you will get that essential back ground knowledge and we will reveal the most common faults and how to correct them in order for you to save time and money.

- Welcome + introduction
- LMCS introduction
- Base module 2 (BM2)
- BM2 functions in detail
- Difference in exhaust gas temperatures
- Engine wiring diagram
- MAN configuration of BM2
- System failure logics
- ASP 12 servo electronics
- Woodward UG MAS
- Installation on AMG EV gear boxes
- PCS introduction
- Hardwired systems
- MAN configuring parameters
- How we handle software
- System hardware
- Propulsion control panel (PCP)
- Maneuver handle panels (MHP)
- Cable plans
- Practical exercises



## 4 High Speed Four-Stroke 4.1. Basic Mechanical and Electronic Courses



These two to five day training courses are aimed at marine as well as stationary applications.

The participants will be introduced to relevant parameters and components of the specific engine type to safely and efficiently operate it.

The training topics are well distributed to cover all aspects of the specific engine type.

### **Please note**

We also offer training courses tailored to the needs of our customers.

These tailor-made solutions can be conducted in Nuremberg as well as on site.

#### **Seminar Contents**

- Welcome and general introduction
- Engine design and engine data
- Safety and special tools
- Handling Eltis (electronic part identification system on CD)
- Introduction to Service DVD (all literature concerning high speed engines)
- Fuel system with mechanical governing systems
- Introduction to Fuel system with electronic speed governing system EDC MS5, MS6 and MS7
- Lube oil system
- Cooling system
- Replacement of the subassemblies
- Introduction to Diagnostic system BE1 and MMDS (MAN Monitoring and Diagnostic System)
- Introduction to the engine diagnostic system MAN-cats I and II
- Introduction to the MMDS diagnosis software
- Introduction to the throttle lever system Mini-Marex and MPC (Marine Propulsion Control)
- Identifying minor faults / troubleshooting
- Execution of maintenance tasks defined by MAN Diesel & Turbo instructions

# 4.2. Advanced Mechanical and Electronic Courses



These three to five day training seminars are aimed at marine as well as stationary applications.

Participants with professional experience or knowledge gathered at basic seminars will enhance their knowledge of the specific engine type to maintain and repair the engine safely and efficiently.

The training topics are carefully selected to upgrade knowledge on the specific engine type.

### **Seminar Contents**

- Welcome and general introduction
- Engine design and engine data
- Safety and special tools
- Handling Eltis (electronic part identification system on CD)
- Introduction to Service DVD (all literature concerning high speed engines)
- Deepen the specific knowledge of fuel, lube oil and cooling systems
- Replacement of engine components
- Overhaul of subassemblies
- Identifying minor faults/troubleshooting
- Execution of maintenance tasks defined by MAN Diesel & Turbo instructions
- Troubleshooting by using diagnostic systems and a ready to operate engine

### **Please note**

We also offer training courses tailored to the needs of our customers.

These tailor-made solutions can be conducted in Nuremberg as well as on site. For further details please contact the Nuremberg Training site.

# 5 Turbocharger

The turbocharger is one of MAN Diesel & Turbo's core competencies. MAN Diesel & Turbo turbochargers are used extensively on both MAN Diesel & Turbo two and four stroke engines. With their vital role in increasing engine output by as much as 300%, they require a high standard of maintenance.



# 5.1 Theoretical Turbocharger Training5.2 Comprehensive Turbocharger Training

### 5.1 Theoretical Turbocharger Training

To ensure correct procedures we offer training for operators of MAN Diesel & Turbo TCA and NA type axial turbochargers. The courses give an overview of essential maintenance work.

Combined with low speed engine courses, 1 day theoretical courses are provided for each turbocharger type.

#### **Course Contents**

- Introduction to the turbochargers
- Maintaining turbochargers
- Necessary service work
- Gaps and clearances
- Evaluation of wear
- Problems and causes
- Assembly groups and spare parts of NA/TCA turbochargers
- Basic information about the functions of NA/TCA turbochargers
- Maintenance schedule and cleaning
- Locating bearing check
- Spare parts catalogue

#### 5.2 Comprehensive Turbocharger Training

To ensure correct operation and maintenance procedures we offer a comprehensive training for MAN Diesel & Turbo TCA and NA type axial turbochargers.

The course gives an overview of essential maintenance work in a mix of theoretical lectures and practical hands-on training.

#### **Course Contents**

- Introduction to the turbochargers
- Maintaining turbochargers
- Necessary service work
- Gaps and clearances
- Evaluation of wear
- Problems and causes
- Assembly groups and spare parts of NA/TCA turbochargers
- Basic information about the functions of NA/TCA turbochargers
- Maintenance schedule and cleaning
- Locating bearing check
- Spare part catalogue
- Dismantling and assembly of NA/TCA in order to perform a major overhaul

### **Booking information**

For both course types – theoretical as well as comprehensive – it is possible to book a combination of NA and TCA or to participate in a training for one specific turbocharger type.

## 6 Online Service

In the present-day globally-networked world rapid transmission of information plays a decisive role.

By means of effective information exchange MAN Diesel & Turbo can transmit important engine and installation data throughout the world, is able to evaluate this information and make available the know-how of OEM experts in real time.

This "Online Service" provides remote support, rapid troubleshooting and thus high levels of plant reliability.

Learn at the PrimeServ Academies everything about the specific features of the MAN Diesel & Turbo Online-Service system and its performance monitoring tool CoCoS EDS.

#### **Course Contents**

- Overview of the whole Online-Service system
- Installation and functional principle
- User training CoCoS EDS
  - How to read standard views.
  - Transfer of data to the system such as ignition pressure measurement.
  - Creation of performance curves.
  - Generation of reports.

### **Duration**

According to topics covered the duration is between one to two days.

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# 7 Course Dates7.1 Two-Stroke Course Dates

### MAN Diesel & Turbo Courses held worldwide

Please find below the course dates. Should our planning not comply with your itinerary, we would ask you to contact us in order to arrange for an additional course.

Special courses can be tailored for individual groups who are unable to participate in any of the scheduled courses. These courses will be offered as to cover any of our MAN Diesel & Turbo products or a specific plant, e.g. after delivery of a vessel or commissioning of a power plant.

Our instructors will be pleased to combine courses for Two-Stroke and Four-Stroke engines in order to suit your specific requirements. The duration of special courses can be negotiated. The course fee for special factory courses amounts to EUR 500 per person/day person at the PrimeServ Academies and to EUR 600, plus expenses for our instructors (flight, hotel, transport) at locations all over the world. If the training equipment has to be shipped to the course location, the respective costs will be included in the invoice.

Please note that all prices stated in our brochure are net prices and subject to the applicable terms and conditions.

#### **Courses 2010 overview**

MC	Location	Date	Language	Price/Student
МС	Denmark, Copenhagen	11.01.2010 - 15.01.2010	English	EUR 2000,-
МС		25.01.2010 - 29.01.2010	English	EUR 2000,-
МС		08.02.2010 - 12.02.2010	English	EUR 2000,-
МС		03.05.2010 - 07.05.2010	English	EUR 2000,-
MC		17.05.2010 - 21.05.2010	English	EUR 2000,-
MC		31.05.2010 - 04.06.2010	English	EUR 2000,-
MC		07.06.2010 - 11.06.2010	English	EUR 2000,-
MC		21.06.2010 - 25.06.2010	English	EUR 2000,-
MC		23.08.2010 - 27.08.2010	English	EUR 2000,-
MC		27.09.2010 - 01.10.2010	English	EUR 2000,-
MC		11.10.2010 - 15.10.2010	English	EUR 2000,-
МС		25.10.2010 - 29.10.2010	English	EUR 2000,-
MC		22.11.2010 - 26.11.2010	English	EUR 2000,-
MC		06.12.2010 - 10.12.2010	English	EUR 2000,-

#### 7.1 Two-Stroke course dates

MC/ME	Location	Date	Language	Price/Student
MC	India, Mumbai	01.03.2010 - 05.03.2010	English	EUR 2500,-
MC		06.09.2010 - 10.09.2010	English	EUR 2500,-
MC	Republic of Singapore	08.03.2010 - 12.03.2010	English	EUR 2500,-
MC		13.09.2010 - 17.09.2010	English	EUR 2500,-
MC	USA, Fort Lauderdale	12.04.2010 - 16.04.2010	English	EUR 2500,-
MC		08.11.2010 - 12.11.2010	English	EUR 2500,-
ME	Denmark, Copenhagen	25.01.2010 - 29.01.2010	English	EUR 2000,-
ME		01.02.2010 - 05.02.2010	English	EUR 2000,-
ME		08.02.2010 - 12.02.2010	English	EUR 2000,-
ME		17.05.2010 - 21.05.2010	English	EUR 2000,-
ME		31.05.2010 - 04.06.2010	English	EUR 2000,-
ME		14.06.2010 - 18.06.2010	English	EUR 2000,-
ME		21.06.2010 - 25.06.2010	English	EUR 2000,-
ME		30.08.2010 - 03.09.2010	English	EUR 2000,-
ME		20.09.2010 - 24.09.2010	English	EUR 2000,-
ME		04.10.2010 - 08.10.2010	English	EUR 2000,-
ME		25.10.2010 - 29.10.2010	English	EUR 2000,-
ME		01.11.2010 - 05.11.2010	English	EUR 2000,-
ME		08.11.2010 - 12.11.2010	English	EUR 2000,-
ME		13.12.2010 - 17.12.2010	English	EUR 2000,-
ME	India, Mumbai	08.02.2010 - 12.02.2010	English	EUR 2500,-
ME		15.02.2010 - 19.02.2010	English	EUR 2500,-
ME		19.04.2010 - 23.04.2010	English	EUR 2500,-
ME		26.04.2010 - 30.04.2010	English	EUR 2500,-
ME		21.06.2010 - 25.06.2010	English	EUR 2500,-
ME		28.06.2010 - 02.07.2010	English	EUR 2500,-
ME		20.09.2010 - 24.09.2010	English	EUR 2500,-
ME		27.09.2010 - 01.10.2010	English	EUR 2500,-
ME		29.11.2010 - 03.12.2010	English	EUR 2500,-
ME		06.12.2010 - 10.12.2010	English	EUR 2500,-
ME	Korea, Pusan	16.02.2010 - 20.02.2010	English	EUR 2500,-
ME		22.02.2010 - 26.02.2010	English	EUR 2500,-
ME		22.03.2010 - 26.03.2010	English	EUR 2500,-
ME		19.04.2010 - 23.04.2010	English	EUR 2500,-
ME		26.04.2010 - 30.04.2010	English	EUR 2500,-

ME/ME-B	Location	Date	Language	Price/Student
ME	Korea, Pusan	17.05.2010 - 21.05.2010	English	EUR 2500,-
ME		31.05.2010 - 04.06.2010	English	EUR 2500,-
ME		06.09.2010 - 10.09.2010	English	EUR 2500,-
ME		13.09.2010 - 17.09.2010	English	EUR 2500,-
ME		29.11.2010 - 03.12.2010	English	EUR 2500,-
ME		06.12.2010 - 10.12.2010	English	EUR 2500,-
ME-B	Denmark, Copenhagen	11.01.2010 - 14.01.2010	English	EUR 1600,-
ME-B		15.02.2010 - 18.02.2010	English	EUR 1600,-
ME-B		16.08.2010 - 19.08.2010	English	EUR 1600,-
ME-B		25.10.2010 - 28.10.2010	English	EUR 1600,-
ME-B	Korea, Pusan	26.01.2010 - 29.01.2010	English	EUR 2000,-
ME-B		10.05.2010 - 13.05.2010	English	EUR 2000,-
ME-B		14.09.2010 - 17.09.2010	English	EUR 2000,-
ME-B		16.11.2010 - 19.11.2010	English	EUR 2000,-
ME-B	Philipines, Manila	02.02.2010 - 05.02.2010	English	EUR 2000,-
ME-B		23.11.2010 - 26.11.2010	English	EUR 2000,-
ME Electrician	Denmark, Copenhagen	25.08.2010 - 27.08.2010	English	EUR 1200,-
ME Electrician		11.10.2010 - 13.10.2010	English	EUR 1200,-
ME SuperIntendent		29.11.2010 - 03.12.2010	English	EUR 2000,-
Low Speed Combined	Location	Date	Language	Price/Student
MC/ME/Turbocharger	Denmark, Copenhagen	25.01.2010 - 05.02.2010	English	EUR 4080,-
MC/ME/Turbocharger		07.06.2010 - 18.06.2010	English	EUR 4080,-
MC/ME/Turbocharger		23.08.2010 - 03.09.2010	English	EUR 4080,-
MC/ME/Turbocharger		25.10.2010 - 05.11.2010	English	EUR 4080,-



### **Booking information**

For booking information on all listed Two-Stroke courses please contact PrimeServ Academy Copenhagen!

### **Further details**

Please find the registration form and applicable terms and conditions under www.mandieselturbo.com/PrimeServ-Academies.

# 7.2 Four-Stroke Course Dates

### 7.2 Four-Stroke Course Dates

Courses	Location	Date	Language	Price/Student
Engine Automation	Germany, Augsburg	25.01.2010 - 28.01.2010	English	EUR 1600,-
		25.05.2010 - 28.05.2010	English	EUR 1600,-
		05.07.2010 - 08.07.2010	English	EUR 1600,-
		25.10.2010 - 28.10.2010	English	EUR 1600,-
Online Service		on request	English	on request
28/33D basic		15.02.2010 - 19.02.2010	English	EUR 2000,-
		20.09.2010 - 24.09.2010	English	EUR 2000,-
28/33 advanced		05.07.2010 - 09.07.2010	English	EUR 2000,-
32/40 basic		25.01.2010 - 29.01.2010	English	EUR 2000,-
		24.05.2010 - 28.05.2010	English	EUR 2000,-
		09.08.2010 - 13.08.2010	English	EUR 2000,-
		06.12.2010 - 10.12.2010	English	EUR 2000,-
32/40 advanced		08.02.2010 - 12.02.2010	English	EUR 2000,-
		18.10.2010 - 22.10.2010	English	EUR 2000,-
32/44 CR basic		25.10.2010 - 29.10.2010	English	EUR 2000,-
Common Rail				
Injection System		26.04.2010 - 28.04.2010	English	EUR 1200,-
		02.11.2010 - 04.11.2010	English	EUR 1200,-
48/60 basic		01.03.2010 - 05.03.2010	English	EUR 2000,-
		19.04.2010 - 23.04.2010	English	EUR 2000,-
		08.11.2010 - 12.11.2010	English	EUR 2000,-
48/60 advanced		08.03.2010 - 12.03.2010	English	EUR 2000,-
		26.07.2010 - 30.07.2010	English	EUR 2000,-
51/60 DF		19.04.2010 - 23.04.2010	English	EUR 2000,-
		06.09.2010 - 10.09.2010	English	EUR 2000,-
58/64		22.02.2010 - 26.02.2010	English	EUR 2000,-
		20.09.2010 - 24.09.2010	English	EUR 2000,-
Propulsion & GenSet	Location	Date	Language	Price/Student
27/38 Propulsion	Denmark,			
Engine	Frederikshavn	11.01.2010 - 14.01.2010	English	EUR 1600,-
		02.03.2010 - 05.03.2010	English	EUR 1600,-

Propulsion & GenSet	Location	Date	Language	Price/Student
		03.05.2010 - 06.05.2010	English	EUR 1600,-
	-	21.06.2010 - 24.06.2010	English	EUR 1600,-
		16.08.2010 - 19.08.2010	English	EUR 1600,-
		11.10.2010 - 14.10.2010	English	EUR 1600,-
		06.12.2010 - 09.12.2010	English	EUR 1600,-
L27/38 GenSet	Denmark, Frederikshavn	25.05.2010 - 27.05.2010	English	EUR 1200,-
		20.07.2010 - 22.07.2010	English	EUR 1200,-
		14.09.2010 - 16.09.2010	English	EUR 1200,-
		16.11.2010 - 18.11.2010	English	EUR 1200,-
21/31 Propulsion Engine		15.02.2010 - 18.02.2010	English	EUR 1600,-
		08.06.2010 - 11.06.2010	English	EUR 1600,-
		27.09.2010 - 30.09.2010	English	EUR 1600,-
L21/31 GenSet		16.03.2010 - 18.03.2010	English	EUR 1200,-
		18.05.2010 - 20.05.2010	English	EUR 1200,-
		06.07.2010 - 08.07.2010	English	EUR 1200,-
		05.10.2010 - 07.10.2010	English	EUR 1200,-
		14.12.2010 - 16.12.2010	English	EUR 1200,-
L&V 23/30 Propulsion Engine		25.01.2010 - 28.01.2010	English	EUR 1600,-
		23.03.2010 - 26.03.2010	English	EUR 1600,-
		12.07.2010 - 15.07.2010	English	EUR 1600,-
		22.11.2010 - 25.11.2010	English	EUR 1600,-
L&V 28/32 A Propulsion Engine		22.02.2010 - 25.02.2010	English	EUR 1600,-
		26.04.2010 - 29.04.2010	English	EUR 1600,-
		23.08.2010 - 26.08.2010	English	EUR 1600,-
		04.10.2010 - 07.10.2010	English	EUR 1600,-
L16/24 GenSet		19.04.2010 - 21.04.2010	English	EUR 1200,-
		29.06.2010 - 01.07.2010	English	EUR 1200,-
		21.09.2010 - 23.09.2010	English	EUR 1200,-
		30.11.2010 - 02.12.2010	English	EUR 1200,-
Advanced Alphatronic 2000		20.01.2010 - 22.01.2010	English	EUR 1200,-
		24.03.2010 - 26.03.2010	English	EUR 1200,-
		16.06.2010 - 18.06.2010	English	EUR 1200,-
		08.09.2010 - 10.09.2010	English	EUR 1200,-
		24.11.2010 - 26.11.2010	English	EUR 1200,-
	Denmark,			
GenSet courses	Holbey	on request	English	on request

Pielstick	Location	Date	Language	Price/Student
PC4.2B Basic	France, St. Nazaire	10.05.2010 - 14.05.2010	French	EUR 2000,-
PC4.2B Basic		19.04.2010 - 23.04.2010	English	EUR 2000,-
PC2.5/PC2.6B Basic		28.06.2010 - 02.07.2010	French	EUR 2000,-
PC2.5/PC2.6B Basic		05.07.2010 - 09.07.2010	English	EUR 2000,-
PA6B Basic		20.09.2010 - 24.09.2010	English	EUR 2000,-
PA6B Basic		15.11.2010 - 19.10.2010	French	EUR 2000,-
PA4-200 Basic		11.10.2010 - 15.10.2010	French	EUR 2000,-
PA4-200 Basic		29.11.2010 - 03.12.2010	English	EUR 2000,-
PA6B Advanced		27.09.2010 - 01.10.2010	English	EUR 2000,-
PA6B Advanced		22.11.2010 - 26.11.2010	French	EUR 2000,-
PA4-200 Advanced		18.10.2010 - 22.10.2010	French	EUR 2000,-
PA4-200 Advanced		06.12.2010 - 10.10.2010	English	EUR 2000,-
Mirrless Blackstone	Location	Date	Language	Price/Student
ESL Mk 1&2 Basic + Advanced	UK, Stockport	25.01.2010 - 05.02.2010	English	EUR 4000,-
		10.05.2010 - 21.05.2010	English	EUR 4000,-
		06.09.2010 - 17.09.2010	English	EUR 4000,-
K Major/MB430				
Basic + Advanced		01.03.2010 - 12.03.2010	English	EUR 4000,-
		05.07.2010 - 16.07.2010	English	EUR 4000,-
		25.09.2010 - 05.10.2010	English	EUR 4000,-
Paxman	Location	Date	Language	Price/Student
VP185 Basic + Advanced	UK, Stockport	15.02.2010 - 19.02.2010	English	EUR 2000,-
		19.04.2010 - 23.04.2010	English	EUR 2000,-
		09.08.2010 - 20.08.2010	English	EUR 2000,-
Valenta Basic + Advanced		07.06.2010 - 18.06.2010	English	EUR 4000,-
		04.10.2010 - 15.10.2010	English	EUR 4000,-
Ruston	Location	Date	Language	Price/Student
RK 215 Basic + Advanced	UK, Stockport	26.07.2010 - 30.07.2010	English	EUR 2000,-
		15.11.2010 - 19.11.2010	English	EUR 2000,-
RK270/RKC Advanced		22.03.2010 - 26.03.2010	English	EUR 2000,-
		24.05.2010 - 28.05.2010	English	EUR 2000,-
RK270/RKC				
Basic + Advanced		20.09.2010 - 01.10.2010	English	EUR 4000,-

# 7.3 Four-Stroke High-Speed Dates



### 7.3 Four-Stroke High-Speed Dates

Four-Stroke High-Speed	Location	Date	Language	Price/Student
Basic mechanical and electronic	Germany, Nuremberg	on request	English	on request
Advanced mechanical and electronic	Germany, Nuremberg	on request	English	on request

### **Booking information**

For booking information on all listed Four-Stroke courses please contact the respective PrimeServ Academy!

### Further details

Please find the registration form and applicable terms and conditions under www.mandieselturbo.com/PrimeServ-Academies.

# 7.4 Turbocharger Course Dates

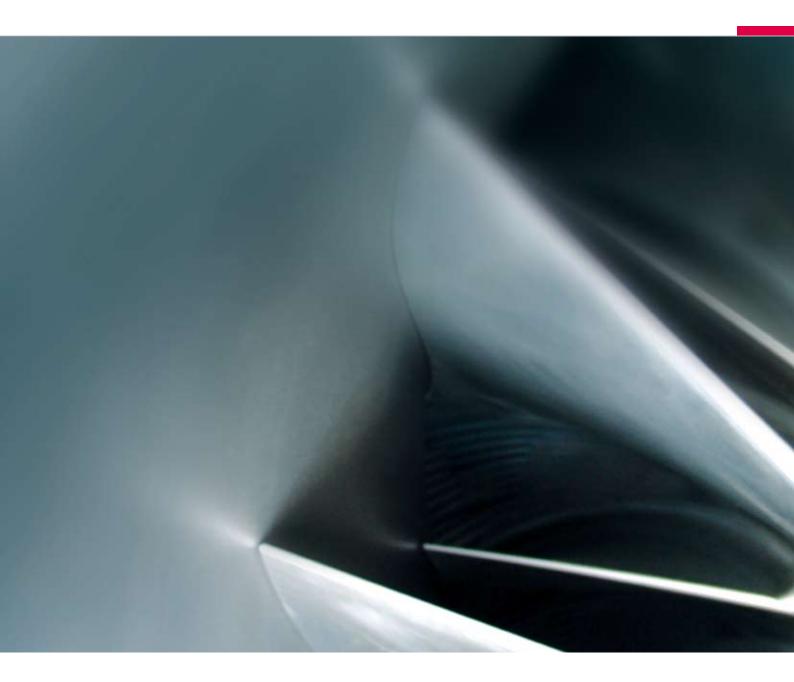
### 7.4 Turbocharger Dates

NA theoretical TCA theoretical	Location	Date	Language	Price/Student
NA	Denmark, Copenhagen	07.02.2010	English	EUR 400,-
NA		12.06.2010	English	EUR 400,-
NA		28.08.2010	English	EUR 400,-
NA		30.10.2010	English	EUR 400,-
TCA		06.02.2010	English	EUR 400,-
TCA		13.06.2010	English	EUR 400,-
ТСА		29.08.2010	English	EUR 400,-
ТСА		31.10.2010	English	EUR 400,-

### **Booking information**

For booking information on all listed Turbocharger theoretical courses please contact PrimeServ Academy Copenhagen!

NA comprehensive TCA comprehensive	Location	Date	Language	Price/Student
NA	Germany, Augsburg	15.03.2010 - 16.03.2010	English	EUR 800,-
NA		03.05.2010 - 04.05.2010	English	EUR 800,-
NA		13.09.2010 - 14.09.2010	English	EUR 800,-
NA	Republic of Singapore	02.03.2010 - 03.03.2010	English	EUR 1200,-
NA	USA, Fort Lauderdale	19.04.2010 - 20.04.2010	English	EUR 1200,-
NA		13.09.2010 - 14.09.2010	English	EUR 1200,-
NA		02.11.2010 - 03.11.2010	English	EUR 1200,-
TCA	Germany, Augsburg	17.03.2010 - 18.03.2010	English	EUR 800,-
TCA		05.05.2010 - 06.05.2010	English	EUR 800,-
TCA		15.09.2010 - 16.09.2010	English	EUR 800,-
TCA	Republic of Singapore	04.03.2010 - 05.03.2010	English	EUR 1200,-
ТСА	USA, Fort Lauderdale	21.04.2010 - 22.04.2010	English	EUR 1200,-
TCA		15.09.2010 - 16.09.2010	English	EUR 1200,-
TCA		04.11.2010 - 05.11.2010	English	EUR 1200,-



### **Booking information**

For booking information on all listed Turbocharger comprehensive courses please contact PrimeServ Academy Augsburg!

### **Further details**

Please find the registration form and applicable terms and conditions under www.mandieselturbo.com/PrimeServ-Academies.

### 8 Academy Locations



A well-trained and knowledgeable team of plant Operation & Maintenance personnel is absolutely essential for a plant in order to:

- increase engine and overall plant, reliability and availability
- maximize service life and times between overhauls
- minimize scheduled and unscheduled down time
- optimize plant capacity
- improve fuel and lube oil consumption and reduce operating costs

To meet these goals, MAN Diesel & Turbo provides a variety of comprehensive training programmes and courses for plant managers, operators and maintenance staff.

We offer customised courses, conducted both in our factories and on-site or on-board ship, worldwide.

Trainings courses cover Diesel plant theory, familiarisation, operation, monitoring & control, maintenance hands-on training and trouble shooting.

In addition, courses for plant management executives are offered, to address current and future operating scenarios that influence the overall economics of plant performance.

# 8.1 Augsburg

### Contact

MAN Diesel & Turbo SE PrimeServ Academy Augsburg 86224 Augsburg, Germany Sylvia Brückl Phone +49 821 322 1397 Fax +49 821 322 1170 Email PrimeServ.Academy-AUG@mandieselturbo.com

#### Accomodation

Hotel Augusta Ludwigstraße 2 86152 Augsburg, Germany Phone +49 821 50140 Fax +49 821 5014-605 Email reservierung@hotelaugusta.de

Steigenberger Drei Mohren Maximilianstraße 40 86150 Augsburg, Germany Phone +49 821 5036-0 Fax +49 821 1578 64 Email reservations@augsburg.steigenberger.de

### Dom Hotel

Frauentorstrasse 8 86152 Augsburg, Germany Phone +49 821 3439 30 Fax +49 821 3439 3200 Email info@domhotel-augsburg.de

## **Airport Shuttle**

ASS Shuttle Service GdbR Phone +49 9187 902879 Fax +49 9187 808951 Mobile +49 175 4180788 Email info@ass-shuttle.de

MAN Diesel & Turbo will add an administration fee of Euro 300 per person if hotel accommodation is arranged for by MAN Diesel & Turbo.

#### **Special arrangements**

The PrimeServ Academy Augsburg can implement courses that meet company-specific training requirements.

These tailor-made solutions can be conducted in Augsburg as well as on site.

# 8.2 Copenhagen



MAN PrimeServ Academy Copenhagen offers

- General courses, available for all seagoing engineers
- Special courses, tailored for a specific plant.
   These courses are held wherever the customer chooses, e.g. on board a vessel, at a shipyard, or in the customer's premises.
- Marine Academy courses provided as an element in the curriculum of a technical college

The constant and rapid development of ship's machinery, combined with the reduction in manning means that today it is vital that operating engineers regularly supplement their practical experience with up-to-date theoretical training.

Our courses in Copenhagen are held in our training centre attractively located on the waterfront next to our headquarters bulding and close to MAN Diesel & Turbo's Two-Stroke facilities, including the R&D centre, production facilities, drawing offices, etc.

The Copenhagen simulator is, among other things, equipped with a FIVA valve and a tacho system which enables more advanced practical exercises. Due to their mobility, the mobile units consist only of the electronical control system and an engine simulator unit.

#### Contact

MAN Diesel & Turbo SE PrimeServ Academy Copenhagen Teglholmsgade 41 2450 Copenhagen SV, Denmark Phone +45 3385 1503 Fax +45 3385 1049 Email PrimeServ.Academy-CPH@mandieselturbo.com

### Accomodation

For accommodation we recommend 2 hotels all situated in the centre of Copenhagen. To get discount you have to do the reservation on the internet and use the MAN Diesel & Turbo company login. Your reservation is guaranteed until 18.00 on the day of arrival. If you arrive later, you need to guarantee with a credit card. The hotel invoice is to be settled at departure, and cannot be handled by MAN PrimeServ Academy.

At least seven (7) days notice will ensure the hotel bookings are accommodated.

Wakeup Copenhagen Carsten Nieburhs Gade 11 1560 Copenhagen V, Denmark Phone +45 4480 0000 Fax +45 4480 0001 Http www.wakeupcopenhagen.com Company login: 119807 The hotel is situated in the centre of Copenhagen which is approx 15 minutes either by train or taxi from Copenhagen airport, the central station is only 8 minutes walk from the hotel.

Copenhagen Island Hotel Carsten Niebuhrs Gade 11 1560 Copenhagen V, Denmark Phone +45 4480 0000 Fax +45 4480 0001 Http www.copenhagenisland.com User: MAN Password: 119807

The hotel is situated about 10–15 minutes walk from the city centre of Copenhagen which is approx 15 minutes either by train or taxi from Copenhagen airport, the shopping mall Fisketorvet is just outside the hotel.

We suggest booking a hotel room from the day prior to start of the training course.

# **Please note**

For Copenhagen courses only, there will be a tour of the workshop test engine and the experience centre Diesel House.

# 8.3 Fort Lauderdale



As the youngest of all MAN PrimeServ Academies, the Fort Lauderdale institution facilitates the following fields of activity:

- General courses, available for all engineers
- Special courses, which are tailored for either:
  - Ship-based power generation and.
  - Land-based power generation.

General courses have a typical duration of one or two weeks. They will mainly be implemented at the Academy's facility in Ft. Lauderdale, Florida.

Special courses have no fixed duration. They may even be implemented at the customer's facility and last from several days to several months, depending on training needs.

The courses put a focus on MAN Diesel & Turbo as well as MEC engines.

# Contact

Attn: Catherine Avendano 551 SW 13th Terrace Building 595 Pompano Beach, FL 33069 Office +1 954 960 6700 Direct +1 954 960 6650 Fax +1 954 782 5426 Email PrimeServ.Academy-FLL@mandieselturbo.com

#### Accomodation

Hotel reservations and pick-up at the hotel can be arranged on request.

Marriott North Ft. Lauderdale 6650 North Andrews Avenue Fort Lauderdale, Florida 33309 USA Phone +1 954 771 0440 Fax +1 954 772 9834

The Westin Ft. Lauderdale 400 Corporate Drive Fort Lauderdale, Florida 33334 USA Phone +1 954 772 1331

Sheraton Suites Cypress Creek Ft. Lauderdale 555 NW 62nd Street Fort Lauderdale, Florida 33309 USA Phone +1 954 772 5400

Extended Stay America Ft. Lauderdale Cypress Creek 5851 N. Andrews Ave Fort Lauderdale, Florida 33309 USA Phone +1 954 776 9447

They will be able to take care of all training-related issues like pick-up, hotel and other services.

# 8.4 Frederikshavn

The PrimeServ Academy Frederikshavn is competence center for training with regards to design, operation and maintenance of MAN Diesel & Turbo Four-Stroke propulsion engines, gearboxes, propeller systems and remote control systems of MAN Diesel & Turbo design.

InadditiontothetrainingonPropulsionsystemstheAcademy is also offering standard courses for MAN Diesel & Turbo Four-Stroke GenSets produced in Denmark and by licensees.

These courses will be conducted at our PrimeServ Academy as well as worldwide at customer's site. The standard training courses are scheduled or can be tailor-made in case of Propulsion systems to the required objectives.

Training courses may consist of theoretical sessions or combined practical and theoretical sessions.

# Contact

MAN Diesel & Turbo SE Niels Juels Vej 15 9900 Frederikshavn, Denmark Phone +45 9620-4100 Fax +45 9620-4040 Email PrimeServ.Academy-FRH@mandieselturbo.com

#### Accomodation

For training course in Frederikshavn we recommend the following hotels:

Scandic Hotel Frederikshavn Tordenskjoldgade 14 9900 Frederikshavn, Denmark Phone +45 9843 3233 Fax +45 9843 3311 Email Frederikshavn@scandichotels.com

SAS Radisson Jutlandia Hotel Havnepladsen 1 9900 Frederikshavn, Denmark Phone +45 9842 4200 Fax +45 9842 3872 Email book@rsjh.dk

## **Please note**

Special tailored Propulsion training courses can be organized upon request for individual groups in Frederikshavn or on-site.

# 8.5 Holeby



The PrimeServ Academy Holeby is a competence center for training with regards to design, operation and maintenance of MAN Diesel & Turbo Four-Stroke Gen-Set engines produced in Denmark and by licensees.

These courses will be conducted at the premises in Holeby as well as worldwide at customer's site. The standard training courses are scheduled or can be tailor-made to the required objectives.

Training courses may consist of theoretical sessions or combined practical and theoretical sessions.

### The specific engine types are

- L23/30H and predecessors
- L28/32H and predecessors
- L16/24
- L21/31
- L27/38
- L32/40CD and predecessors

The training courses are conducted at customers' request.

## Contact

MAN Diesel & Turbo SE Østervej 2 4960 Holeby, Denmark Mr. Jørn Næss Phone +45 5469 3100 Fax +45 5469 3031 Email PrimeServ-HOL@mandieselturbo.com

# **Please note**

Special tailored GenSet training courses can be organized upon request for individual groups in Holeby or on-site.

# 8.6 Nuremberg



Learn everything about High Speed Engines where these engines are designed and built.

The courses conducted by experienced technical instructors give an overview of essential design and operating features in a mix of theoretical lectures and practical hands-on training. This applies to the basic training courses as well as the advanced training course at the Nuremberg location.

### Contact

MAN Diesel & Turbo SE Vogelweiherstr. 33 90441 Nuremberg, Germany Phone +49 911 420 6728 Fax +49 911 420 1967 Email marinemotor@de.man-mn.com

# 8.7 St. Nazaire

We offer professional, high value training courses run by an experienced team of instructors. We offer the updating and advanced courses over the whole range of Pielstick engines.

#### Efficient and effective

- Training in French or English
- Courses by qualified instructors
- Illustrations through numerous media and practice on mock-ups
- Factory tour

#### **Pielstick Four-Stroke engines**

With over 35 years experience we developing training programmes in engine operation, service and maintenance. Thanks to the skills acquired during the training you will optimise:

- Availability, reliability and safety of a plant
- Operating and maintenance costs

The general training courses cover the design, operation and maintenance of Pielstick Four-Stroke engines.

## "A la carte" programme

Scheduled programme

31 hours' training spread over 5 days for learning and optimize time far from the working place.

# Customized programme

Training adapted to your specific needs (automation, Turbochargers, specific maintenance...).

#### On site training

Overall or thematic 5 days training on site.

The open training courses cover the design operation and maintenance of Pielstick fourstroke engines.

#### **Special Courses**

Specially tailored training courses for individual groups can be organised either in Saint-Nazaire or on-side. They are subject to a minimum fee, equal to participation by four trainees.

The duration and the programme of such courses are negotiated individually.

Lectures are conducted in English or French, however by prior arrangement an interpreter may be employed at an extra cost. The customer is responsible for all travel, accommodation and incidental expenses. Assistance is given in making travel and accommodation arrangements.



### Contact

MAN Diesel SAS Avenue de Chatonay, Porte 7 44615 Saint-Nazaire, France Mr. Jean-Christophe Claus Phone +33 240 90 69 59 Fax +33 240 90 65 50 Email PrimeServ.Academy-STN@mandiesel.com

### Accomodation

For the training courses in Saint-Nazaire, we recommend the following hotels which offer special MAN Diesel & Turbo rates on request:

Holiday Inn Express \*\*\* 1 Rue de la Floride 44600 Saint-Nazaire, France Phone +33 240 19 01 01 Fax +33 240 19 01 04 Email resa@saint-nazaire.hiexpress.com www.hiexpress.com/saintnazaire

The hotel is situated near the seafront and not far from our training facility.

My Suite Appart-hôtels \*\*\* 47 Boulevard de la Libération 44600 Saint-Nazaire, France Phone +33 240 00 64 88 Fax +33 228 54 14 15 Email stnazaire@mysuiteapparthotels.com www.mysuiteapparthotels.com

The hotel is situated in the heart of Saint Nazaire, 300 m from the railway station and 40 min. by taxi from Nantes airport.

### Transportation

The daily transport between the hotel and the training facility is arranged by the PrimeServ Academy, Saint-Nazaire.

We suggest booking a hotel room from the day prior to the start of training. MAN Diesel & Turbo add an administration fee of EUR 300.00 per person if the hotel bill is to be sent to MAN Diesel & Turbo. If the guest settles the bill on departure there will be no administration fee added to the invoice.

# 8.8 Stockport



# Building employee skills and improving engine performance

Operational performance and engine life can be significantly enhanced by raising the level of employee skills, and key to this is expert training

### MAN Diesel & Turbo is the original manufacturer of

- Mirrlees Blackstone
- Paxman
- Ruston

# Training Courses are offered for the following engine types

- ESL Mk 1 & 2
- K Major & MB a430
- RK215
- RK270&RKC
- Valenta
- VP185

Our training service represents a valuable investment in two ways: it improves the skills and productivity of your employees and it enhances the performance of your engines by making them run longer, more efficiently and more reliably.

We deliver training at our purpose-built Academy in Stockport, UK, and we can also provide it on-site at your business location anywhere in the world.

We run regular scheduled courses on the different engine types, and we also design and deliver bespoke courses according to your specific needs.

Our scheduled ten day courses are for operators and maintenance staff. The courses cover theory and practical 'hands-on' instruction on all major maintenance tasks and overhaul procedures. The course is offered for a wide range of engine types and includes generic trouble-shooting techniques.

Our five day courses are for engineers or operators who want to gain a better insight into engine design and operation. While predominantly theory-based, they can include practical work for specific engine types.

Our schedule of planned training courses is updated regularly but we remain flexible and dedicated courses can be arranged for different engine types.



### Key benefits of Academy based training

- The Academy is well equipped with a full range of training engines for practical exercises.
- The Academy has all the necessary special maintenance tools.
- The Academy has well resourced lecture room facilities.
- The Academy allows a wide ranging and comprehensive training course to be completed in the shortest period.
- The visit will include introductions to other PrimeServ UK product support departments.

#### Key benefits of On Site training

- The training course can be specifically designed for your engines.
- You can ensure that the maximum numbers of employees are able to attend the training.
- Actual maintenance can be carried out during the training course.
- The special tools supplied can be demonstrated in their correct operation.
- An informal 'health-check' of the installed engines is possible.

Advice can be given on specific problems or improvements.

### Contact

PrimeServ Academy Stockport MAN Diesel Limited Bramhall Moor Lane Hazel Grove Stockport, Cheshire SK7 5AQ England Phone 0161 483 1000 Ext. 4520 or Direct 0161 426 4520 or 4521 Fax 0161 487 1465 Email PrimeServ.Academy-STO@mandiesel.com

#### Accomodation

To book accommodation in Stockport please contact the PrimeServ Academy Stockport.

# 8.9 Regional Training Locations

#### Training at

MAN Diesel North America 2, Amboy Avenue P.O.Box 5043 Woodbridge, NJ 07095, USA Phone +1 732 582 8200 Fax +1 732 582 0032

MAN Diesel Korea Ltd. M. J. Kim 1601-1 Songjeong-dong Gangseo-gu Busan, Korea (Zip Code: 618-819) Phone +82 (0)51 635 6644 Fax +82 (0)51 635 4004

MAN Diesel Singapore Emily Koh MAN Diesel & Turbo Singapore Pte Ltd 14 Tuas Avenue 1, Singapore 639499 Phone +65 6349 1602 Fax +65 6862 1409 Emily.Koh@sg.man.eu www.mandieselturbo.com

Anglo-Eastern Maritime Training Centre Francis Akkara Plot No. 50, Karmayog Building Parsi Panchayat Road Andheri (East) Mumbai 400 069, India

Intership Navigation Training Center Inc. Teodoro Moro 2/F CRI Building Pres. Quirino Avenue, Malate 1004 Manila, The Philippines

### **Registration at**

MAN Diesel & Turbo SE PrimeServ Academy Copenhagen Teglholmsgade 41 2450 Copenhagen SV, Denmark Phone +45 3385 1503 Fax +45 3385 1049 Email PrimeServ.Academy-CPH@mandieselturbo.com

# 9 Course Registration

#### **Applicable Terms and Conditions**

MAN PrimeServ training and tuition will be carried out solely according to the "MAN Diesel & Turbo General Terms and Conditions on the Provision of Training Services" which form the contractual basis for the provision of training and tuition by MAN PrimeServ.

The Terms and Conditions are available by mail from MAN PrimeServ or can be downloaded from the webpage:

www.mandieselturbo.com/PrimeServ-Academies.

#### Important information

In the following, we would like to briefly inform you of our "cancellation/substitution policy":

The customer agrees to notify the PrimeServ Academy in writing, if he wishes to cancel a training course or replace a participant. The PrimeServ Academy will charge the following cancellation fees:

No cancellation fee will be charged, if the written cancellation is received by the PrimeServ Academy more than 21 calendar days prior to the start of the training course. A cancellation fee of 50% of the total costs will be charged if the written cancellation is received by the PrimeServ Academy within 10 to 21 calendar days prior to the start of the training course. A cancellation fee of 100% of the total costs will be charged, if the written cancellation is received by the PrimeServ Academy less than 10 calendar days prior to the start of the training course. The PrimeServ Academy less than 10 calendar days prior to the start of the training course. The PrimeServ Academy accepts replacement of participants, unable to attend up to the start of the training.

#### **Further details**

Please find the registration form and applicable terms and conditions under www.mandieselturbo.com/PrimerServ-Academies.

MAN Diesel & Turbo 86224 Augsburg, Germany Phone +49 821 322-0 Fax +49 821 322-3382

PrimeServ.Academy-AUG@mandieselturbo.com www.mandieselturbo.com