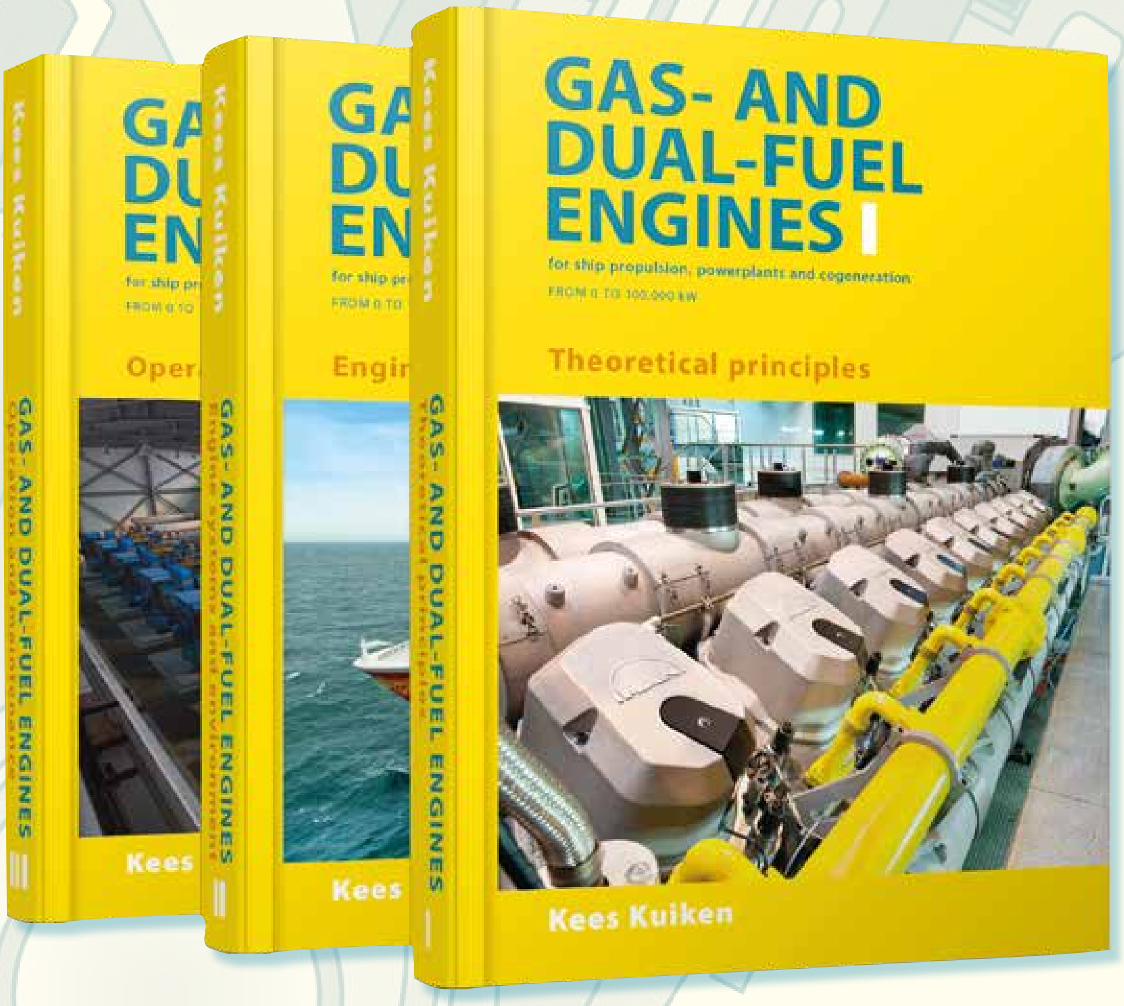
The new gas- and dual-fuel engine book

for ship propulsion, power plants and cogeneration



Kees Kuiken
Target Global Energy Training

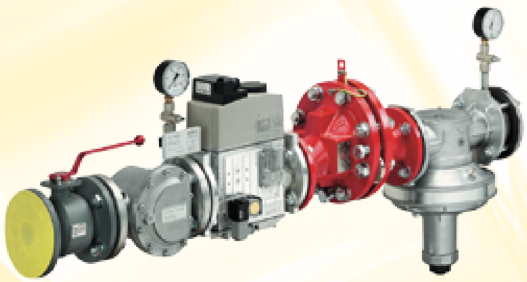
GAS- AND DUAL-FUEL ENGINES

for ship propulsion, power plants and cogeneration from 0 to 100,000 kW

This first edition of a three-part book on gas- and dual-fuel engines is intended for all who work with gas- and dual-fuel engines for maritime propulsion, power generation and cogeneration:

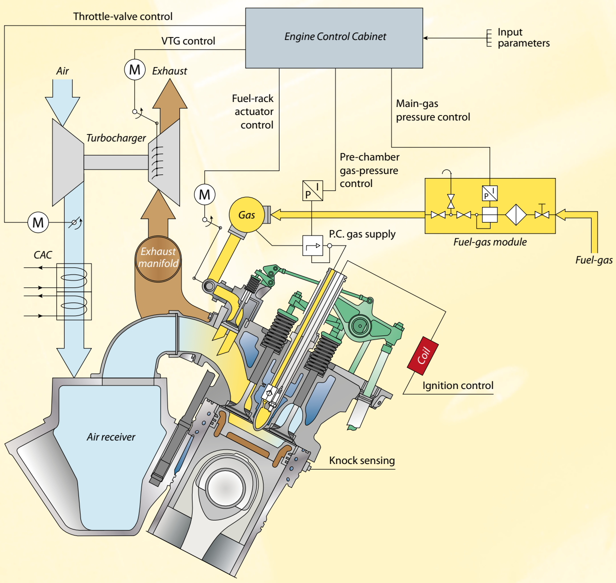
- Maritime training institutes and maritime universities;
- Maintenance and reconditioning companies;
- Shipping companies deep-sea, inland, towage, dredging and heavy-load cargo;
- Insurance companies, classification bureaus, surveyors;
- Shipping industry suppliers, suppliers of engine parts, fuel and lubricating oil;
- Engine manufacturers and dealers;
- Power Plants;
- Cogeneration.

When compiling this book, a practical approach was chosen using ample authentic graphic material with detailed explanations allowing the reader to gather pertinent information without laboriously going through the main text.



Important subjects: principles, gaseous and liquid fuels for gas-, dual-fuel- and diesel engines, ignition systems, new technologies, engine systems and environment, endoscopy and measurements, cogeneration.

Leading companies and institutes have contributed to the realisation of this book by providing information, photographs and interviews. Ninety per cent of the more than 2900 pictures are in colour.

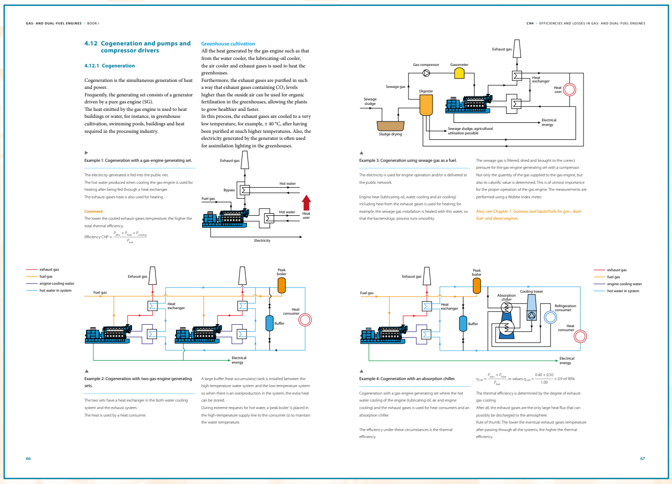


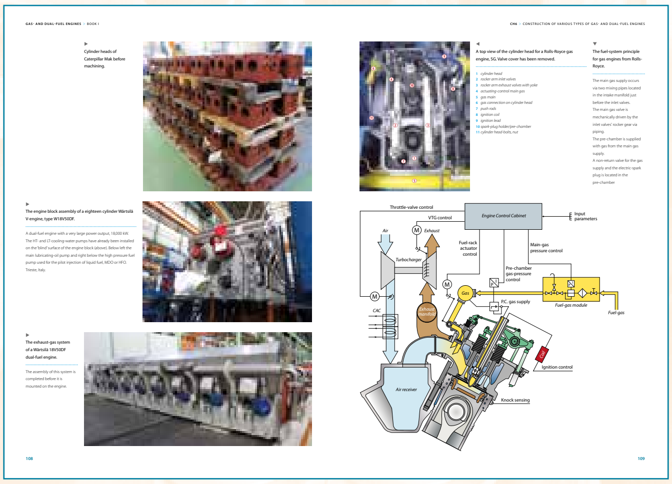
The three volumes consist of 488, 544 and 534 pages each.
Price of one book (three parts) 2016: The Netherlands, € 210,- inclusive packing, shipping and 6% VAT; EU I, II and III €225,-; Rest of the world € 250,- all-inclusive packing and shipping costs.

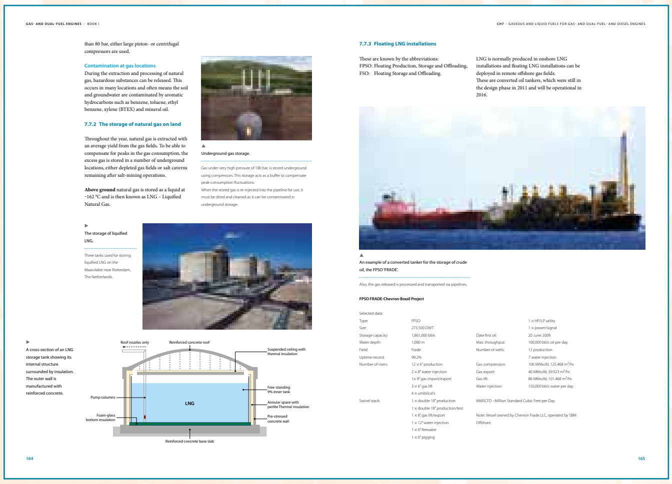
Discounts for orders over 25 books. Maritime Institutes and Training Centres up to 20% discount.

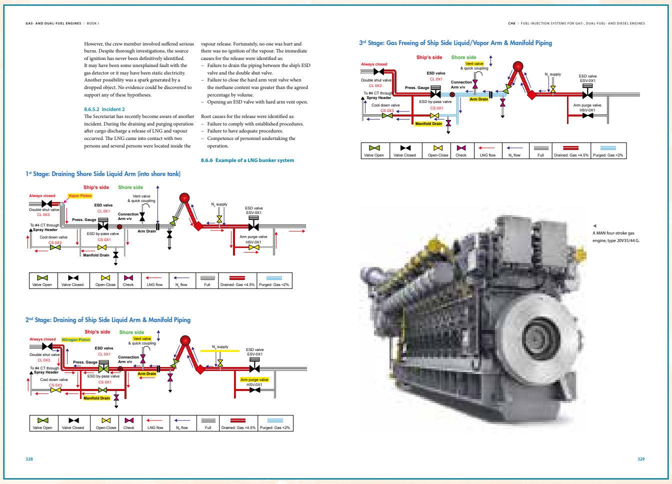
The three parts will be sealed and delivered in heavy-duty carton packaging at cost price.

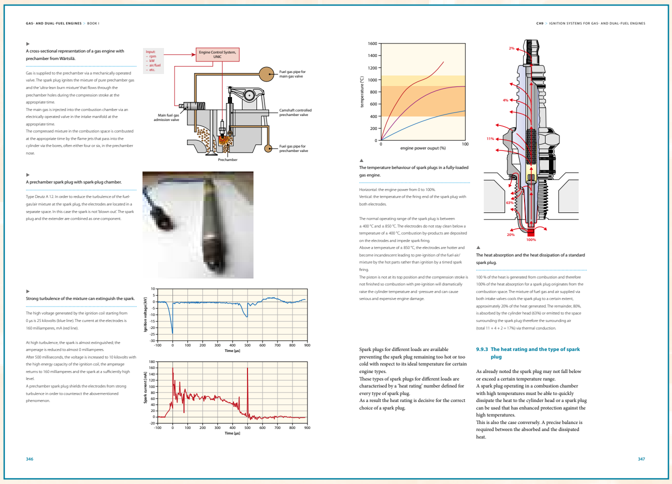
The companies mentioned below all have contributed to the realisation of this book. This has been made possible by allowing interviews, consenting to the use of photographs, providing abundant information or by correcting texts. For this we would like to express our sincere gratitude: A.M.W. Marine (The Netherlands), ABB B.V. (The Netherlands),ABB Turbochargers (Switzerland), ABC, Anglo Belgium Corporation (Belgium), Alfa Laval Benelux B.V. (The Netherlands), August Storm (Germany), August Storm B.V. (The Netherlands), Bergen Engines B.V. (The Netherlands), Breko Reparatie B.V. (The Netherlands), Brinkman & Niemeijer Motoren B.V. (The Netherlands), Caterpillar Marine Power Systems (Germany), Caterpillar Motoren GmbH (Germany), CENTA Nederland B.V. (The Netherlands), Chemgas Shipping (The Netherlands), Chris Marine (Sweden), Controlin (The Netherlands), Cummins Holland B.V. (The Netherlands), DBR (The Netherlands), Den Hartog B.V. (The Netherlands), Denso Europe B.V. (The Netherlands), Det Norske Veritas GL (The Netherlands), Diesel Engines Online B.V. (The Netherlands), Diesel Publications (USA), Discom B.V. (The Netherlands), Dungs (The Netherlands), Easy Connections B.V. (The Netherlands), Ener-G Nedalo (The Netherlands), Fjord Line (Norway), G.M.S. Instruments B.V. (The Netherlands), Gate Terminal Rotterdam (The Netherlands), GE Power& Water (The Netherlands), Gebroeders Sol (The Netherlands), Geislinger GmbH (Austria), Genpower B.V. (The Netherlands), Goltens Dubai (UAE), Goltens Rotterdam B.V. (The Netherlands), Hanwell Environment & Energy B.V. (The Netherlands), Hatz Nederland B.V. (The Netherlands), Heinzmann GmbH CO.KG (Germany), Holland Roerpropeller B.V. (The Netherlands), IHC Holland (The Netherlands), IHC Lagersmit B.V. (The Netherlands), JR SHIPPING B.V. (The Netherlands), Kemper en Van Twist Diesel B.V. (The Netherlands), Koedood Dieselservice B.V. (The Netherlands), L'Orange (Germany), L.P. Koster & Zn. B.V. (The Netherlands), Lek/Habo (The Netherlands), Ludwig Hunger (Germany), M. Jürgensen GmbH & Co KG (Germany), M.R.C. (The Netherlands), Machinefabriek Bolier B.V. (The Netherlands), Machinefabriek G. Olthof N.V. (The Netherlands), Machinenfabrik Alfing Kessler GMBH (Germany), Maerkisches Werk GmbH (Germany), Maersk Line (Denmark), Maersk Ship Management (The Netherlands), Mahle GmbH (Germany), Maine Maritime Academy (USA), MAK Nederland B.V. (The Netherlands), MAN Diesel & Turbo (Germany), MAN Diesel A/G (Germany), MAN Diesel A/S Alpha (Denmark), MAN Diesel Prime Serv Academy (Denmark), MAN Prime Serv (The Netherlands), MAN Rollo B.V. (The Netherlands), Maritime Institute Willem Barentsz (The Netherlands), Mark van Schaick B.V. (The Netherlands), Maritime Academy (USA), Mastervolt B.V. (The Netherlands), Merford (The Netherlands), Miba Bearing Group (Austria), Mobil Oil B.V. (The Netherlands), MOTORTECH GmbH (Germany), MTI Holland B.V. (The Netherlands), MTU Benelux B.V. (The Netherlands), MTU Friedrichshafen GmbH (Germany), MWM Benelux (The Netherlands), N.V. Nederlandse Gasunie (The Netherlands), Nicoverken Holland B.V. (The Netherlands), Noord-Hollandse Motorenrevisie B.V. (The Netherlands), Pasman Motoren & Aggregaten (The Netherlands), Perkins (UK), PK OEM Parts (The Netherlands), Pon Power B.V. (The Netherlands), RDA Ship Support (The Netherlands), Rederij Doeksen (The Netherlands), Regulateurs Europa (The Netherlands), Rolls-Royce Marine AS (Norway), Rolls-Royce Power Systems (Germany), Royal Huisman Shipyard (The Netherlands), Rubber Design B.V. (The Netherlands), Ruysch International B.V. (The Netherlands), Sandfirden Technics (The Netherlands), SKF Marine Service Centre (The Netherlands), Stena Line Ferries (The Netherlands), Støvring Kraftvarmevaerk (Denmark), The Swedish Club (Sweden), The Vestfold Academy (Sweden), Topec B.V. (The Netherlands), Total Nederland N.V. (The Netherlands), Turbo's Hoet Nederland B.V. (The Netherlands), Turner Engine Controls Solutions (The Netherlands), UK 284, Cornelis Zeeman (The Netherlands), VAF Instruments B.V. (The Netherlands), Van Dinteren Technische Handelsonderneming (The Netherlands), Van West-Holland B.V. (The Netherlands), Vereniging Importeurs Verbrandingsmotoren (The Netherlands), Vetus B.V. (The Netherlands), Wagenborg Shipping B.V. (The Netherlands), Wartsila Italia (Italy), Wärtsilä Netherlands B.V. (The Netherlands), Wärtsilä Schweiz A.G. (Switzerland), Waterschap Groot Salland (The Netherlands), Westfalia Separator Nederland B.V. (The Netherlands), Woodward Nederland B.V. (The Netherlands), Zantingh Energy Services (The Netherlands)





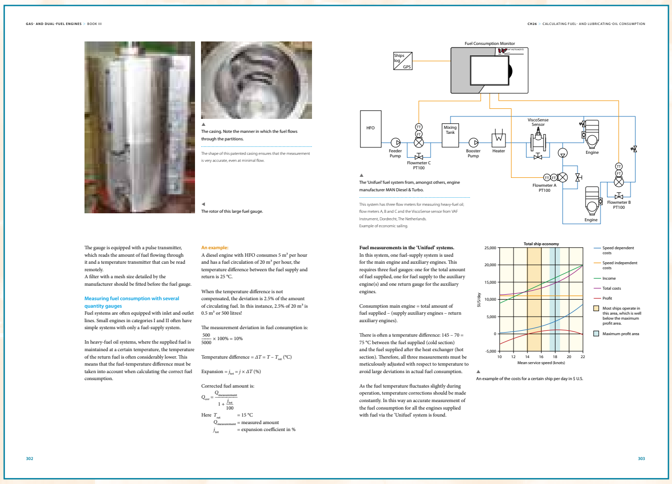
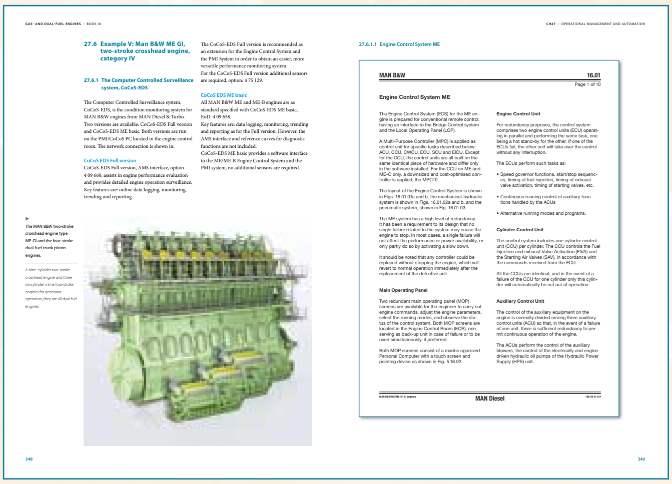
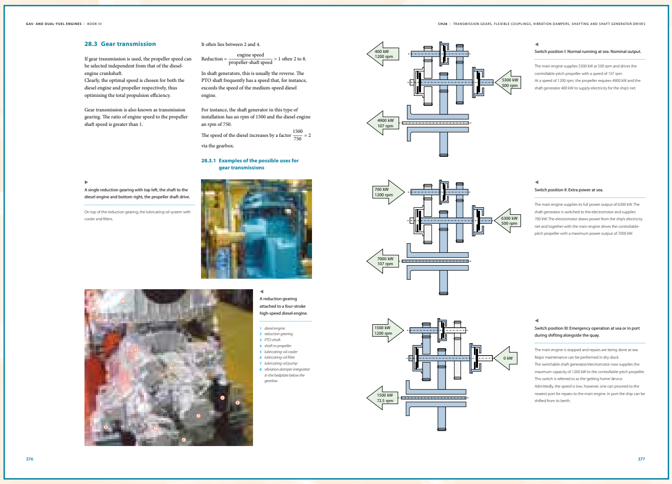


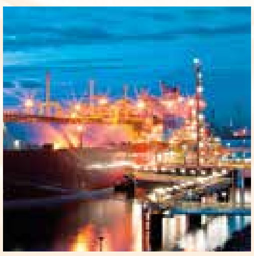





10.18.2 The Seferine

20.18.4 3D-measurements

20.27.2.11 Adjustment of the Top Dead Centre (TDC)


27.6 Example V: Man B&W ME GI, two-stroke crosshead engine, category IV
MAN B&W
16.01
Engine Control System ME
MAN Diesel

28.3 Gear transmission



GAS

Book I: Principles

1 The use of industrial gas- and dual-fuel engines Introduction – The Otto cycle – The Diesel cycle – Internal combustion engines with two fuels, often called ‘dual-fuel’ engines – Uses of Otto engines – Uses of Diesel engines **2 Classification of gas- and dual-fuel engines** Introduction – Operating principle – Design – Rotational speed – Power output or shaft power – Fuels used – Uses of gas- and dual-fuel engines – Other characteristics of gas- and dual-fuel engines – Numbering the cylinders – Natural aspiration and turbocharging **3 Working principles of gas-, dual-fuel- and diesel engines** Operating principles – Design of the four-stroke gas engine – Two-stroke crosshead engines – A few significant differences between the two-stroke and four-stroke cycles – Important terms and definitions in gas-, dual-fuel- and diesel engines – Examples of engine names **4 Efficiencies and losses in gas- and dual-fuel engines** Efficiencies and losses – The Indicator diagram – Parameters of both operating principles – The engine formula – Indicated thermal efficiency – Mechanical and total efficiency – Specific fuel consumption – Mean effective pressure – Thermal energy balances or Sankey-diagrams – Efficiencies of installations using gas- or dual-fuel engines as power generators – Marine propulsion – Cogeneration and pumps and compressor drivers **5 Parameters of gas- and dual-fuel engines** Mean effective pressure – Mean piston speed – The load parameter – The compression ratio – The power density – The speed of gas- and dual-fuel engines and the relationship with the dimensions of the engine stroke volume – Speeds for generator operation **6 Construction of various types of gas- and dual-fuel engines** The difference between gas- and dual-fuel engines and diesel engines – Differences in the construction between diesel engines and gas- and dual-fuel engines – Category I: Industrial gas engines of 0 to 100 kW shaft power, gaseous fuel, four-stroke, high-speed – Category II: Industrial gas- and dual-fuel engines of 100 to 10,000 kW shaft power, gaseous fuel or a combination of gas and diesel oil/heavy fuel oil – Category III: Industrial gas- and dual-fuel engines of 500 to 30,000 kW shaft power, gaseous fuel or gas/diesel oil/heavy-fuel oil, four-stroke, medium-speed – Category IV: Industrial gas- and dual-fuel engines of 1500 to 100,000 kW shaft power, gaseous fuel or gas in combination with diesel oil or heavy-fuel oil, two-stroke crosshead engines, low-speed **7 Gaseous and liquid fuels for gas-, dual-fuel- and diesel engines** A GASEOUS FUELS: Introduction – Pure-gas engines, Otto-principle – Gaseous fuels – Physical properties of natural gas – Physical properties of biogas – The calorific value of gases – The production of fuel gases B LIQUID FUELS Introduction – Development of internal combustion engines – Composition of liquid fuels – Definition of heavy oil – Refining crude oil – Chemical composition of hydrocarbon compounds – Standardisation of liquid fuels – Fuel properties – Additional fuel specifications – Decreasing the sulphur content in fuels – Bunkering – Fuel-line systems according to the engine classification, pure diesel engines – Modular fuel-treatment systems – Bunkering fuels – Methanol – A good alternative for ferries and short sea shipping **8 Fuel-injection systems for gas-, dual-fuel- and diesel engines** Introduction – Fuel-supply systems – Fuel-supply systems for pure gas engines Spark Gas (SG) – Fuel-supply systems for pure diesel engines (D) – Fuel-supply systems for dual-fuel engines (DF) – Bunkering of liquid natural gas, LNG, transfer arms and manifold draining, purging and disconnection procedure **9 Ignition systems for gas- and dual-fuel engines** Ignition of gas engines – Ignition of dual-fuel engines – The use of both principles – Ignition systems for gas engines with the Otto-principle – Location of the spark plug in the combustion space – Spark-plug construction – Electrode shape – Electrode materials – The heat rating of the spark plug – Spark erosion and chemical corrosion – Spark-plug types – Examples from Denso – Ignition systems – Ignition coils – Triggering – High-tension leads and accessories – Primary Leads – Extensions – Wiring Rail Systems – Tools and test equipment – Spark plugs and accessories **10 New technologies** Introduction – Gas- and dual-fuel engines – Established technology and the current developments (2016) – Improving the engine response to power-output variations without decreased engine efficiency – Increasing power density and the application of fixed-pitch propeller-propulsion – Prospects – A concept by ABB: the Power 2, ABB two-stage turbocharging system – The use of gas engines in the maritime industry – Gas engines operational in the maritime industry – A few of the obligatory regulations for marine-gas engines – Safety and classification issues – The composition of liquefied natural gas, LNG – Emissions – LNG bunkering – Ship types suitable for LNG operation – Future developments – LNG – liquefied natural gas for use in gas- and dual-fuel engines – Five pilot projects – Comparison between two different operating principles for two-stroke crosshead engines **11 Speed control** Introduction – Summary – Types of governors – Examples of engine configurations with different types of governors – Theoretical background of governors – Governor-operating principle – Example: The 1100 series from Regulateurs Europa located in Roden, The Netherlands – Example: 1115-4G governor 4–20 mA speed setting – The speed control

Book II: Engine systems and environment

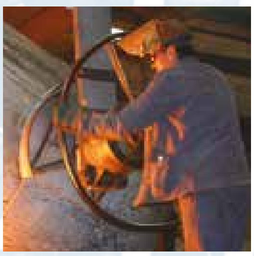
12 Air supply Introduction – The Otto-process, the principle of mixture compression – Some specific facts for gas engines – Air-supply systems for gas- and dual-fuel engines – General: mixing air and fuel-gas – The amount of air – Air supply to the engine – Principle of turbocharging – Turbocharger manufacturers – Capacity curves – Description of three turbocharger manufacturers – development of modern turbochargers – Small turbochargers, engine categories I and II – Turbocharger with a separate power turbine – Power turbines with generator – Air supply in four-stroke engines – Air supply in two-stroke crosshead engines – Various approaches to turbocharging in two-stroke crosshead engines – Some important points of interest with regard to the air supply in diesel engines – Maintenance of turbochargers – Problems with turbocharging – Engine load – Flow performance of scavenging- and combustion-air in a four-stroke trunk-piston engine and a two-stroke crosshead engine **13 Cooling of gas-, dual-fuel- and diesel engines** Introduction – Cooling agents for gas-, dual-fuel- and diesel engines – Cooling-water treatment – Corrosion – Products for cooling-water treatment – Cooling-water treatment products, brands – Cleaning cooling-water systems contaminated with oil – Bacteriological contamination – Testing cooling water – Macro-biological growth in seawater-cooling systems – Design of cooling-water systems – Cooling-water system defects – Damaged engine parts – Standard cooling-water system – Cooling systems according to the engine classification – Examples of cooling methods for engine parts – Examples according to the engine classification – Combustion-air cooling – Special cooling systems – Pipe coolers and plate coolers – Cooling systems in a diesel-power plant – Cogeneration systems – Cooling systems for gas-and dual-fuel engines – Summary for cooling-water systems **14 Lubrication of engines** Introduction – The purpose of lubrication – Three types of lubrication – Engine parts that require lubrication and cooling – Common lubricating-oil system – Examples of lubricating-oil systems following the four classification categories – Lubricating-oil properties – Cleaning lubricating oil – Lubricating-oil analysis – Lubricating-oil analysis for gas-, dual-fuel- and diesel engines – Nitration of lubricating oil in gas engines – Examples of gas-engine lubricants – Examples of engine manufacturers’ specifications for lubricating oil in gas- and dual-fuel engines **15 Starting systems for gas-, dual-fuel- and diesel engines** Introduction – Starting methods – Reversing the engine **16 Vibrations and balancing** Introduction – Methods to reduce torsional vibration using dampers – Main causes of vibration – Forces exerted on the driving gear and engine block – Resonance – Balancing diesel engines – Principle of an internal combustion engine – Crank- and connecting-rod mechanism – Forces in a two-stroke crosshead engine – Vibrational levels, acceptable values – Tangential-force diagram – Degree of cyclic irregularity – Vibrations in engine frame and propeller shaft – Axial vibrations – Engine balancing: theoretical background – Forces and moments – Resultant forces and moments in the engine block – External forces and moments – Example of the balancing used in a Wärtsilä 9L46 four-stroke engine, category III – Balancing V-engines – Balancing examples for two-stroke crosshead engines, category IV – Shaft generators in two-stroke crosshead engines – Vibration numbers and orders – Vibrational frequencies – Example 1: adjusting the engine speed because of damaged cylinder liners – Example 2a: simulation on six cylinders – Example 2b: simulation on five cylinders – Example 3: simulation of two engines and one propeller shaft – Examples of engine-frame tearing – Measurements for vibration dampers – Measuring equipment – Vibrational energy – Design of a propulsion installation – Effects of vibrational frequencies – Flywheel – Examples of crankshafts either with or without counterweights – Combustion forces exerted on the driving gear – Vibrations in gas- and dual-fuel engines **17 Engine noise: origin and damping** Introduction – Origin of noise in diesel engines – Sound transmission – Silencers for diesel engines – choosing a silencer – Noise reduction of diesel engines in categories I and II – Turbocharger noise – Sound levels in diesel engines – Examples of the engine arrangement with silencers – Power plants with gas- and dual-fuel engines **18 Gas- and dual-fuel engine manufacturers** Introduction – Classification in four categories – MTU Friedrichshafen GmbH, Germany – ABC, Ghent, Belgium – Caterpillar Global Petroleum, Houston, United States of America – Caterpillar Marine Power Systems, Hamburg, Germany – Daihatsu, Tokyo, Japan – GE Power & Water, Distributed Power, Atlanta, Georgia, United States of America – Hyundai Heavy Industries, Ulsan, South Korea – MAN Diesel & Turbo –

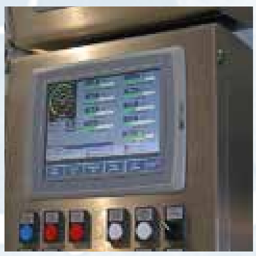




Book III: Operation and maintenance

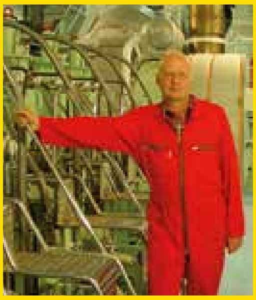












The author

Kees Kuiken started his career in 1963 by enrolling as a marine engineering student at the Maritime Institute at Terschelling, The Netherlands.
After graduation, he joined the United Dutch Shipping Company (Verenigde Nederlandse Scheepvaartmaatschappij, VNS).
In 1978, he went on to become a lecturer in marine engineering at the Maritime Academy at Delfzijl and Groningen, and also worked in the mechanical engineering- and operational technology departments.
He was passionate about building a large and advanced practical lab for both intermediate and higher maritime education, as well as for trade and industry.
In 1995 he founded the European Training Centre for engine technology, the ETM, an educational foundation.
In 2000, he left regular teaching and established Target Global Energy Training.
The company conducts training sessions worldwide in diesel- and gas engine technologies, gas- and steam turbines, compressors and cogeneration.
Furthermore, Target provides solutions for a myriad of technical problems and publishes books and manuals.
All the training programs are tailor-made and given on location.
In 2012 the second edition of the diesel engine book came onto the market and in 2016 this new book *Gas-and dual-fuel engines for ship propulsion, power plants and cogeneration*.

This book can be ordered directly from
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