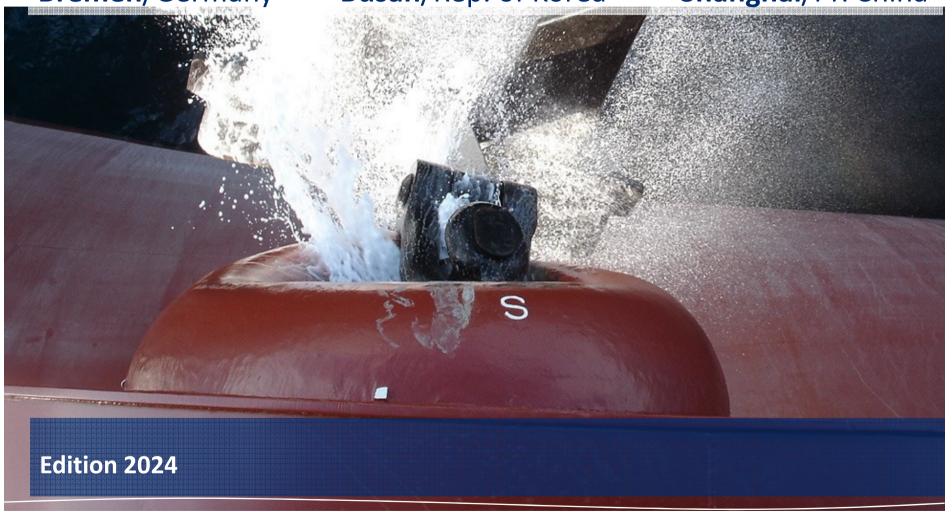
Introduction to MOVENA Group

Bremen/Germany - Busan/Rep. of Korea - Shanghai/PR China





About MOVENA

- Founded in 2011 in Bremen/Germany, with affiliated companies in Busan/S-Korea and in Shanghai/PR China.
 Business focus: Germany, South Korea, PR China
 All shareholders and managers have classification background (Germanischer Lloyd)
 Abt. 20 senior in-house experts for all main ship related activities
- MOVENA provides technical services and management consulting to the maritime, renewable energy and oil & gas industries
- Specialized on classification and certification related services
 Special relationship due to work history of Movena team: GL, DNVGL, ClassNK++
- MOVENA has excessive technical competence in classification, certification, ship new building, ships in service as surveyor, plan approval, training



About MOVENA – our unique differentiators

- We understand "CLASSIFICATION" from drawing approval to inspection
- We operate strong maritime networks in Germany, South Korea, PR China
- We focus on ship optimization and ship efficiency
- We have special relationship with all relevant IACS ship classification societies,
 LR-Shipdesign AG (Switzerland) for AFT OPT innovative ship hull design for substantial fuel and CO₂ savings, OceanScore for ship data incl. of CII (emissions) etc.











Founder Movena Group (Germany, PR China)

Dr.-Ing. Volkmar Wasmansdorff



- Founder of MOVENA Group (2011)
- MD of German Movena GmbH and MMCS in Shanghai, partner of Movena Korea
- Profound network within the German maritime society
- Senior Advisor to the Executive Board of ClassNK, Tokyo, until 2022
- 20+ years international experience for delivery of turn-key industrial plants and management of Asian subsidiaries of ThyssenKrupp Group, Engineering Division (ThyssenKrupp Industrial Solutions)
- Until 2010: Executive Vice President Germanischer Lloyd AG (GL), Head of Region Asia/Pacific (>700 employees, 200 mio USD turnover)



Founder Movena Korea

You-Seong Kim, Managing Director



- Managing Director Movena Korea
- Mechanical Engineer, Experience of 35 years on Maritime business
- 17 years at DSME in Design and Engineering (Mach/Piping Design)
- 15 years at GL in plan approval and business development
 - Plan approval for Machinery, Piping system
 - Business Development for all Korean yards, international ship owners
- 3 years at DNV GL for Key Account Manager of SHI and DSME
- Own strong personal network to senior decision makers in all major ship operating and ship building companies in Korea
- Experienced in selling new and established services which require large scale investments by the maritime and oil and gas industry.
- Experienced in selling GL Future ship software solutions, such as ECO insight to Korean ship owners and ship yards
- Experienced in project management of Offshore projects at initial stage, Drillship, FPSO, FLNG



Services of Movena Group Companies

2024

Movena GmbH, Germany

Movena GmbH focuses on demanding consulting and services jobs for ship owners, banks and maritime stakeholders in Germany. We deliver – in an exclusive cooperation with LR-Shipdesign AG, Switzerland – AFT OPT innovation (patented new hull design) for substantial fuel savings

Decades of experience in **ship classification**, quality assurance (incl. IACS, IMO, SOLAS)

In-house experts: naval architects/mech. engineers, hull & machinery; solving flag state issues, ship emission experts

Network of specialists/principal surveyors for bulkers, CV, MPV, tankers.

Partners: for docking/crewing benchmarks;

Partners: for docking/crewing benchmarks; ship financing

assoc. with
Shanghai Marine Surveyors Co. Ltd, PR China

Competence analysis of Chinese shipyards and external supervision teams; risk analysis by German experts based in China and Asia/Pacific

Surveys by **German experts with class background**; spot-checks, condition surveys, acting as **Owner's Rep.**; **insurance claims**

Project managers for ship newbuildings, fleet in service (management tasks only)

Providing **designated employees** for customers'

ship operation (ship surveys, internal audits)

OPEX optimization with a focus on long-term value and operational availability of ships



Services of Movena Group Companies

MOVENA KOREA Co., Ltd.

Movena Korea is owned by their employees. The core team of more than 10 former GL and third party managers covers the full scope of services for shipping companies. Following highlights In addition to the scope offered by Movena GmbH and MMCS:

MOVENA Korea has excessive technical competence in classification, certification, ship new building and ships in service as surveyors and plan approval engineers.

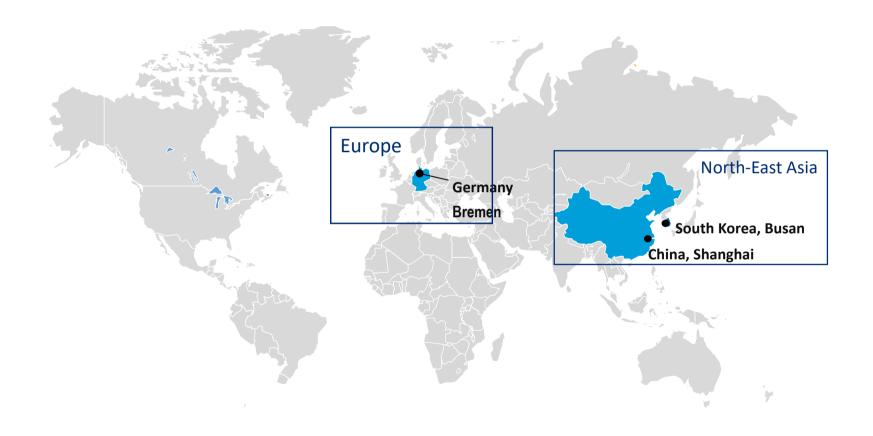
MOVENA Korea offers own **experts** such as naval architects, marine engineers, project managers and inspectors to enable to manage the project from the evaluation for the technical specifications to final delivery, covering all the intermediate phases such as shipyard assessment, selection of equipment makers, plan approval, provision of specialist teams for construction supervision and technical support to the ship's crew.

MOVENA offers an **expert site team** for technical service and new building supervision with long lasting experience in Korean and Chinese yards. MOVENA supports **Owner's site team** as the local partner/agency in Korea and China with respect to technical services and new building supervision.

Pragmatic approach to all issues leading to an effective management of the project Network inside of the **Maritime Industry in Korea; registered R&D unit (by Korean Government)**



MOVENA Group operates in Europe and East Asia





Service Scope





Core Business Scope for the Maritime Industry





Shipbuilding, repairs and conversions

- Supervision
- Drawing Approval
- Attendance of Shop Trial & Installation of major machinery
- Pre-Delivery Inspection
- Inspection and Evaluation of Ship Yards
- Project Management
- Accident/Incident inspection
- Conversion and Retrofit support and supervision
- Management of class related issues
- EEDI certification
 Consulting to increase EEDI Value,
 Audit and Witness of Model Tank
 Test, Review of EEDI Technical file,
 Ship speed trials and verification



Ships in service

- Audit preparations for ISM, ISPS, ILO, etc.; IHM
- Pre-Class renewal, annual survey, damage survey, Condition Surveys Accident/Incident on board attendance and assistance
- Docking/Repair support and supervision
 Assistance in pre-planning of Docking / Class
 Renewal (esp. for ships
 >15 years in age)
- Conversion and Retrofit support and supervision
- Sourcing of local services, companies, spares, etc.
 Relation to local Class
 Offices



Materials & Components

- Inspections
- Certification consulting
- MED Authorized representative services
- Quality assurance
- End of warranty inspections



Marketing & sales consulting

- Business promotion for maritime and renewable energy clients in Germany, S-Korea and PR China
- Agent of selected maritime equipment and components
- Ship yard broker for repairs and ship new building contracts in China
- Market studies and marketing communication in Korea and PRC
- Training



Detailed Scope Movena Services for Ship Owners – NB/FiS

- Consulting Service to Ship owner in the contracting stage
- Improving ship design w/access to patented know-how (aft ship optimization etc.)
- Plan approval services as owner's representatives
- Survey as owner's representatives
- Dry Dock Booking / Yard booking
- Maintenance Services to shipping companies
- Consulting services for the support of the Classification/Authority activities

Detailed Scope Movena Services for Shipyards - Newbuildings

- Contract phase
- Design phase
- Construction phase
- Advisory Services (Engineering Services)
- Consulting related to shafting systems, BWTS, scrubber systems
- Design review and Field services for owners
- Training of Shipyard Designers, Owner's Inspectors and Class Surveyors

Detailed Scope Movena Services – Material and Components

- MED Authorized Representatives (serving Korean companies in European Union)
- Consulting and Issuance of MED Certificates
- Consulting and Issuance of PED, ATEX Certificates
- Consulting of WPS, welding shop approval and welder's approval
- Consulting of Heat Treatment for Class approval
- 3rd & 2nd party inspections
- Consulting of Renewable energy
- Audit of ISO 9001

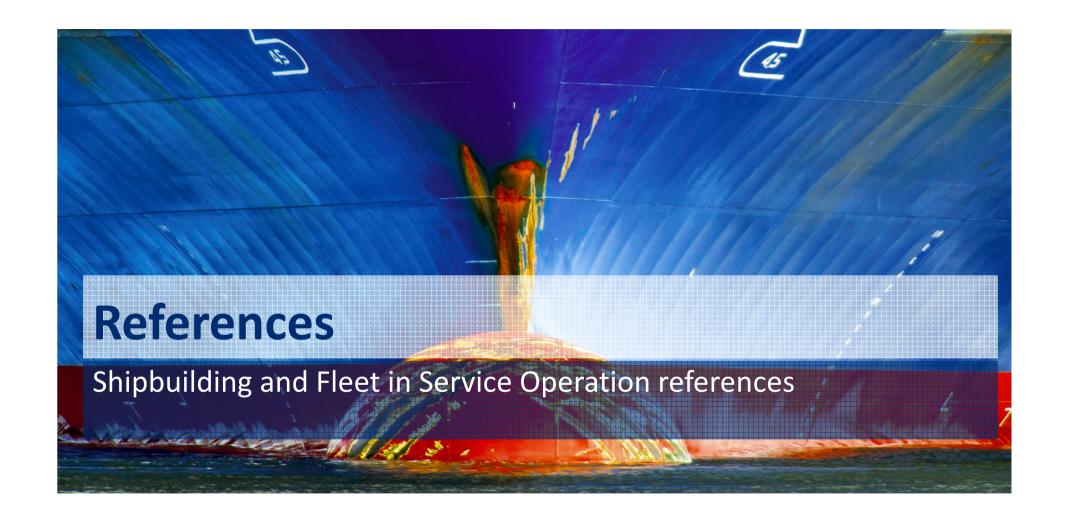
Detailed Scope Movena Services – Gas Fuelled Ship

- All ship types: Container ships, Tankers and Bulk carriers, etc.
- Consulting for retrofit of existing vessels and newbuilding phase
- Feasibility studies
- Project Management of the entire retrofit process
- Preparation of the Specification, Commercial evaluation and Design/Approval
- Consulting of Safety and Piping System Diagrams
- Consulting of HAZID and HASOP
- Survey and preparation of document during ship conversion at yard

Detailed Scope Movena Academy Services (in South Korea)

- Newbuilding Process
- ISM/ISPS/ILO
- Ship Design Technology: Hull, Machinery & piping, Electrical and automation including HV system, Shaft and rudder, Main and auxiliary equipment
- Welding WPS and Welding shop approval
- IMO MARPOL Annex 2,3,4,5 & 6
- EU-MRV & IMO DCS
- Renewal Energy
- Inspection: Newbuildings, Materials & Equipment, Welding
- Role of Classification Societies
- PSC
- Ballast water management systems
- Fleet in Service
- Smart Port (in English)







MOVENA engineers have experience in design review for hull, machinery, piping and propulsion systems and surveys from over 300 ship new building, repair and conversion projects of all major ship types.

Experience with ship types:



Container vessels: 1,000 TEU to 20k+ TEU

LNG carriers: 10k to 216k cbm

Bulk Carriers: 73k to 180k DWT

Tankers: 105k to 310k DWT

Chemical Tankers: 45K to 82K DWT

Drill ships, PCTC, MPV, Mega Yachts



Shipyards serviced by MOVENA engineers Review of the design and documentation & Surveys

China Japan, USA Romania Dongfang Oshima Shipyard Daewoo Manglalia Philly Shipyard Guangzhou Zhuneishi Shipyard Shipyard Guangzhou Wenchong Korea, Philippines **Spain** Huanghai Shipbuilding liangsu Honggiang SHI Factoria Naval de Marine HHI Marin Jiangsu New Yangzi HMD Shipbuilding HSHI Jiangzhou Iran SPP Jinlin Shipyard Sungdong Nanjing Wujiazui SADRA (Iran Daesun Marine Industrial Rongcheng Shenfei DSME Samjin Company) STX STX Dalian Hanjin Yongdo Taizhou Kouan Daehan Yangfang Hanjin Philippines Zhejiang Ouhua



Ship Owners serviced by MOVENA engineers (extract)

USA/Canada Germany **Norway** China Korea Hapag-Lloyd China Shipping Chevron TEKY Hanjin Shipping COSCO CONOCO Phillipps Hamburg Süd KneusenGolla SK Shipping OOCL CP Offen Seaspan HMM CCCS ER Schiffahrt Italy, France KMTC CIMC Group NSB UK Peter Döhle MSC Japan Hamburg Süd CMA CGM BP DS Tankers, NYK DS Schiffahrt Greek MOL Orion Bulkers Oldendorff Carriers Briese Schiffahrt **Middle East** Tecnoma IRISL UASC **Denmark** KOTC **Singapore** AP Moller Maersk PNO Nedllovd NOL



MOVENA Engineers have worked with all major classification societies and have experienced for over 300 newbuildings from GL & DNVGL





...with drive into the future

Movena GmbH

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