



# ***Retrofit of Ballast Water Treatment Plants***

## ***A turnkey solution....!***

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[www.w3d.de](http://www.w3d.de)

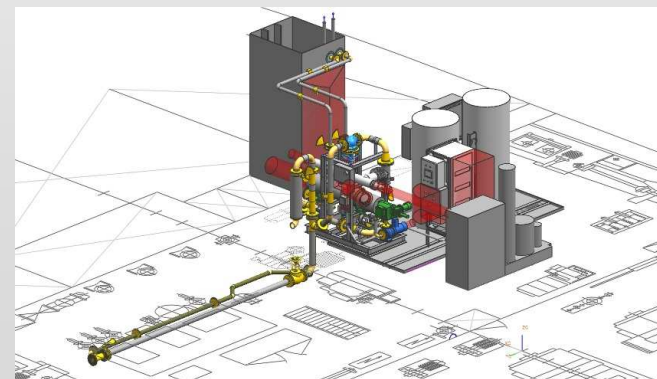
# Introduction



Almost 50 years of engine room design  
experience!

[www.w3d.de](http://www.w3d.de)

- **Founded:** 1968
- **MD:** Dipl.-Ing. Gerd Hagemeister
- **Team:** 35 employees (+ freelancer)
- **Certification:** DNV GL DIN ISO 9001
- **Offices:** Lübeck + Hamburg



# BWMS Retrofit Process



**Planning &  
Design**

**Production &  
Installation**

**Integration &  
Commissioning**

**After Sales  
Service**

Planning & Design



Production &  
Installation



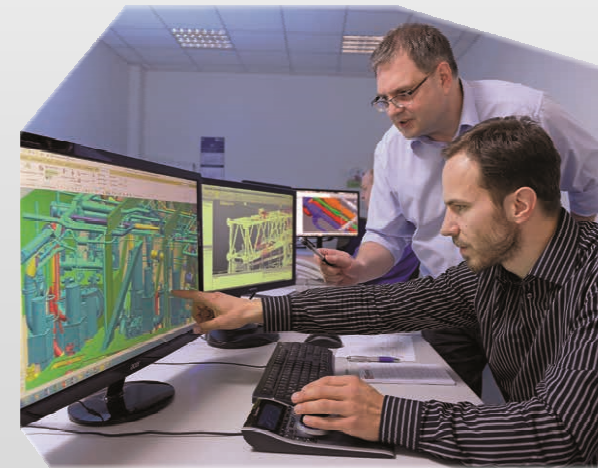
Integration &  
Commissioning



After Sales  
Service



- Laser Scan + Onboard inspection
- System Selection
- 3D Design
- Preparation of drawings, parts lists, etc.
- Preparation of class approval documents and new ballastwater manual (D1 -> D2)



Fotos: Christian Augustin / aktiv im norden

Planning & Design



Production &  
Installation



Integration &  
Commissioning



After Sales  
Service



- Production of piping, valves and foundations
- Purchase of cables & connections
- Logistics
- Installation



Planning & Design



Production &  
Installation



Integration &  
Commissioning



After Sales  
Service



- Electrical Integration
- Bridge Automation
- Commissioning
- Crew Training
- Project Management

**mare**systems  
marine solutions





Planning & Design



Production &  
Installation



Integration &  
Commissioning



After Sales  
Service



- Service
- Repair
- Supply of Consumables

**mare**systems  
marine solutions

**HYUNDAI**  
HEAVY INDUSTRIES CO., LTD.

**TECHCROSS**

**Raytheon** Anschütz



**COSCO**  
SHIPPING

**N**  
HEN DWAY

**NSR**

**STI**  
STEEL TUBE INDUSTRIES

**PUYIER**

合盛海洋  
HEHONG OCEAN  
**KTM**

# ECOTRIPLE

## MARINE TURNKEY SOLUTIONS

**Turnkey– one stop shop!**

**ONE reliable and  
experienced partner!**





## Our Team / Experience



- 49 years of engine room engineering
- 25 years of manufacturing & installation
- 20 years of service & integration
- 10 years of liner shipping & ship owning

**Reliable, independent engineers, craftsmen & consultants**

# Our Services: pick & choose

- **Feasibility studies**
  - On board survey (manual measurement, laser scanning)
- **Detailed design**
  - Incl. electrical integration
- **Class documents**
  - BW management plan
  - BW diagram
  - EA plan
- **Workshop design**
  - Foundations, isometrics, installation drawings
- **Manufacturing & parts logistics**
- **Assembly & installation on board**
- **Installation supervision**
  - Setup and commissioning
- **Aftersales Service** (selected manufacturers)

**Scrubbers,  
too!**

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