

# BALLAST WATER TREATMENT RETROFIT SOLUTIONS

#### ONE STOP SHOP RETROFIT WORLDWIDE

Ballast water treatment. Many rules, many things to do. At Damen you will find one-stop-shop solutions for the retrofit market. Our clients ask for compliant operation and life cycle support – so that's what we deliver.

#### RETROFITTING

We understand that retrofitting a ballast water treatment system is not simple and that many factors have to be taken into account, such as:

- Footprint & maintenance space
- Power consumption
- Piping & tie-ins
- Pressure drop & ballast pump capacity
- Integration of controls
- Internal transportation
- Approvals and class requirements
- CAPEX & OPEX



#### TAKING CARE OF BOTTLE NECKS

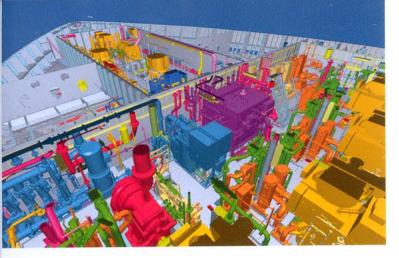
With thousands of vessels needing to comply with ballast water regulations, the market will face practical bottle necks. How will you deal with equipment supply, the engineering capacity, availability of (yard) facilities, class capacity and other related issues? How will you ensure one time right?

#### COMBINING CAPABILITIES TO HELP YOU

Damen can help you. Damen has over 85 years of experience in shipbuilding and marine related conversions. We offer worldwide, comprehensive and cost effective one-stop-shop retrofit solutions. Either as a single turnkey project or as a step by step process – whichever best fits your operation and schedule.

QUESTIONNAIRE BASIC QUOTATION SURVEY & BASIC ENGINEERING BASIC ENGINEERING





#### A STAGED APPROACH - ONE TIME RIGHT

Preparation is key for a successful retrofit project, one time right. Damen is following a well defined process which includes:

- System selection
- On board survey, 3D scanning & basic engineering
- Detail engineering
- Purchasing & delivery of material packages
- Full installation or supervision only
- Commissioning, start-up and training







#### **PARTNERSHIPS**

Damen's focus on standardization is undoubtedly one of its core capabilities when it comes to delivering ballast water compliance. We work with several selected major system makers in order to provide competitive efficient retrofit packages.

#### LIFE CYCLE SUPPORT

Our services do not stop after installation. We provide systems maintenance and deliver spare parts for retrofitted ballast water treatment systems.

#### PEACE OF MIND

Avoid high cost and avoid the rush. Be prepared and let us handle your ballast water treatment retrofit in a timely and co-ordinated way.

PURCHASING & PRE-FABRICATION

INSTALLATION

START UP & COMMISSIONING

**▶** SERVICE



DAMEN BALCON



DAMEN LOFLO

### DUMEN

**DAMEN ENGINEERED SYSTEMS**Damen developed exclusive smart

designs of complete approved BWT systems for easy fitting.

## YOUR TRUSTED GLOBAL PARTNER FOR BALLAST WATER COMPLIANCE

#### **OUR ADVANTAGES**

- Central co-ordination
- Cost effective total package
- Optimized turnaround times
- Leverage Damen buying power
- Partnerships
- Secured supply chain
- Logistics support
- Experience, flexibility & trust
- Worldwide service network
- In depth ballast water treatment knowledge

#### WORLDWIDE SOLUTIONS

Installation of a ballast water treatment system can be done at one of our Damen shipyards conveniently located worldwide. We can also install or supervise at a location of your choice or even during operation.









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Damen Shiprepair & Conversion yard
Damen new building yard
Business cooperation (new building)
Damen Shiprepair & Conversion agents

#### CONTACT

Please contact us at **green@damen.com** or contact your local Damen Ship Repair & Conversion yard to discuss the solution that suits you best.

FOR MORE INFORMATION VISIT www.damenballastwatertreatment.com www.damenshiprepair.com

#### RETROFIT SOLUTIONS

DAMEN

DAMEN SHIPYARDS GROUP

