



# SHIPBUILDING

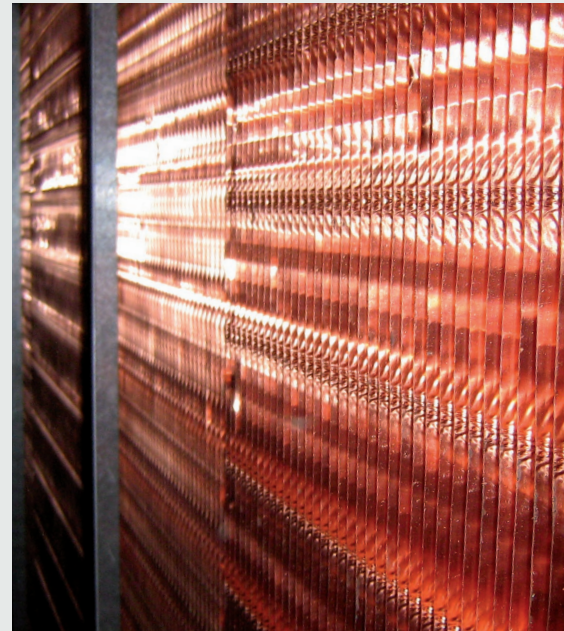
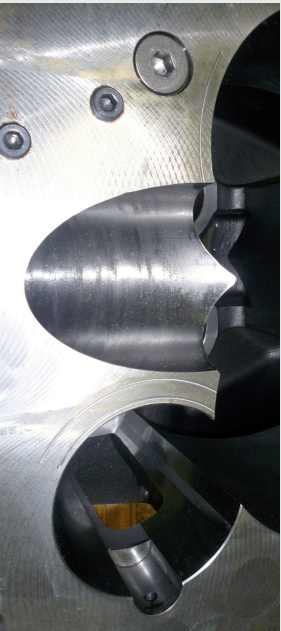
REFRIGERATION, AIR-CONDITIONING,  
VENTILATION



**KNAACK & JAHN**  
Marine Systems and Ship Repair

**WE DELIVER!**

## GOOD DRAFT



### Welcome on deck

Knaack & Jahn shipbuilding is a medium-sized company based in Hamburg with offices in Bremerhaven and Kiel as well as other locations. Our regular customers – comprising ship-yards, shipping companies and private customers both in Germany and internationally – are supported by the expert advice of an experienced team of specialists.

### Services

- Repair, conversion and spare parts for systems of any makers i.e.: SABROE, NOVENCO HI PRESS, YORK, ROM, STAL
- New constructions for all application areas of refrigeration, air-conditioning and ventilation systems technology
- Service for all systems and makers
- Custom-made constructions
- Quality standard DIN ISO 9001
- Models in accordance with Solas, Marpol, DIN and all classification agencies
- Consulting
- Environmental technology

### Advantages

- 24-hour service-line
- Immediate availability of qualified staff
- Offers and planning at short notice
- Orders completed on time
- Proximity to customers through presence in Hamburg, Bremerhaven and Kiel
- Worldwide service range
- Experienced and qualified team
- Everything from a single supplier



WE DELIVER!



## BETTER COOLED



### Research vessel FS "METEOR"

Knaack & Jahn shipbuilding carried out extensive work on the air-conditioning system while the research vessel FS "METEOR" was docked in the MWB yard of Bremerhaven. The client was the Reedereigemeinschaft Forschungsschiffahrt.

### Disassembly/assembly of the air-mixing chambers

New air-mixing chambers with variable air volume regulation as well as accompanying air-conditioning units were replaced in the laboratory area and an additional cooler installed for the dry provisions room. After all the air-mixing chambers were dismantled, the new air-mixing chambers were installed in the remaining free space. The control system was wired on site and incorporated in the existing system. Owing to the use of a larger design of air-mixing chamber, extra space had to be created. This set a unique challenge in planning and assembly in order to meet the construction deadline.

### Conversion/extension of the ventilation system

Four existing living quarters were converted to sauna and fitness rooms. We constructed, supplied and assembled the necessary fresh air and used air systems, including a new exhaust fan with external seal in accordance with the regulations of Germanischer Lloyd (now DNV). The control system for the airconditioning was also replaced.

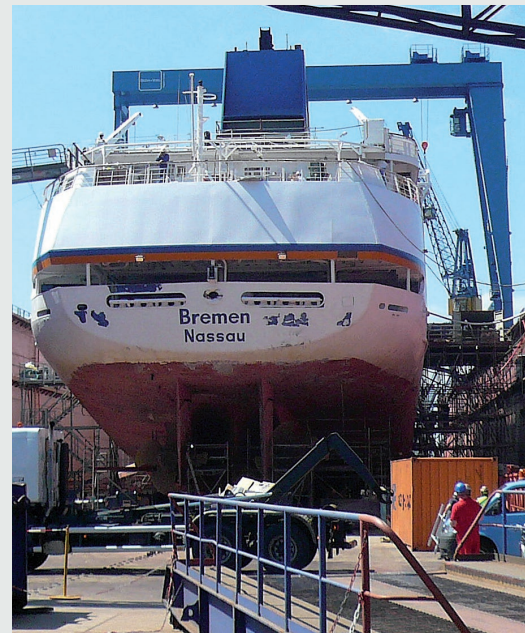
### Cruise liner "MS EUROPA"

Repairing of A/C water chiller no. 4 on 5 star cruise liner MS "EUROPA". Herefore cleaning of system by removing of seawater and dirt from the system. Cleaning of oil separator through diverse cutting and welding works with approval of Germanischer Lloyd (now DNV). Repairing of the STAL Screw compressor. Furthermore repairing and upgrading of complete SABROE provision system.

WE DELIVER!



## BEST AIR



### Typical example of our work

Extension of the provisions refrigeration system on the 5-star cruise liner "SEA CLOUD" in Las Palmas. The calculation, construction, supply on site, including electrical control through frequency converters as well as pipe work and cabling was successfully carried out by Knaack & Jahn shipbuilding.

Delivery, mounting and piping of one selfcontained air-conditioning unit for switchboard room on Hapag Lloyd vessels: CMS "ESSEN EXPRESS", CMS "STUTTGART EXPRESS" and CMS "PARIS EXPRESS".

Replacement of the air-conditioning units of the ventilation system on the CMS "PARIS EXPRESS", CMS "STUTTGART EXPRESS" and CMS "ESSEN EXPRESS" during the crossing to Halifax and during the dry dock period in Hong Kong. The refrigeration systems were converted from R 22 to R 404 A at the same time.

Planning and design, supply and commissioning of an additional split air-conditioning system for the bridge on the M/S "PROTEUS" in Rotterdam. The A/C compressor of main airconditioning system has been renewed at the same time.

Upgrading of an additional air-conditioning cabinet for ventilating the machine control room on the CMS "SANTIAGO EXPRESS".

Conversion of the provisions refrigeration system on the 5-star cruise liner "SEA CLOUD" in the Caribbean.

Replacement of a V 4 A deep freeze evaporator on the 5-star cruise liner "SEA CLOUD II" in accordance with the USPH regulations of the United States Health Authorities.

### FIRST STEPS ARE ALWAYS WELCOME

Knaack & Jahn  
Schiffbau GmbH  
Stenzelring 39  
21107 Hamburg/Germany

T +49 40 31 97 92 77 0  
F +49 40 31 97 92 77 7

[www.kj-marinesystems.com](http://www.kj-marinesystems.com)  
[www.k-j.de](http://www.k-j.de)

[climatecontrol@k-j.de](mailto:climatecontrol@k-j.de)

Subject to change without prior notice. Errors excepted.

## WE DELIVER!