

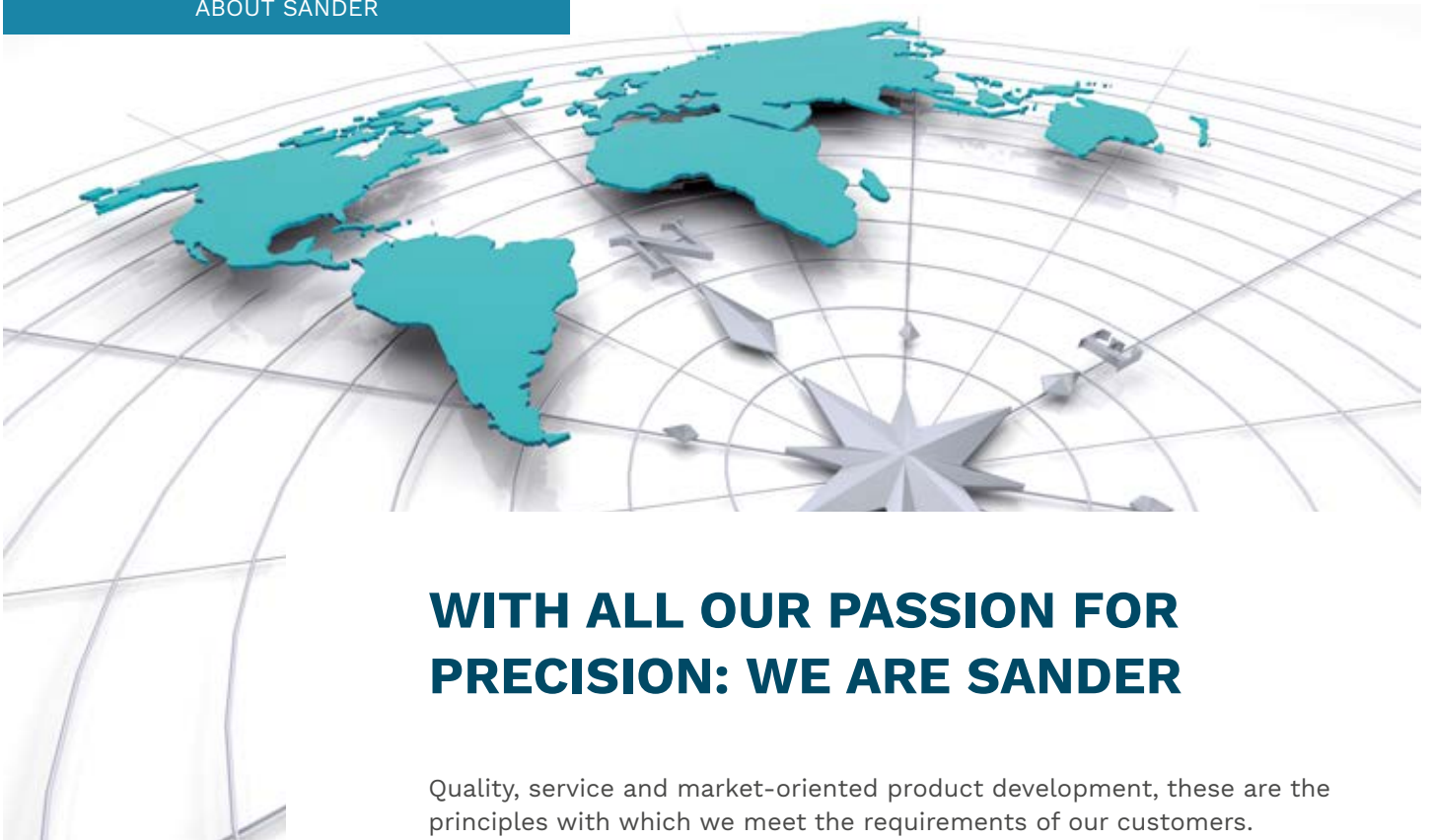
NO COMPROMISES

# GERMAN ENGINEERING FOR THE SHIP'S INSIDE



**SANDERMARINE**  
MARINE + OFFSHORE EQUIPMENT

**SANDERNAVY**  
NAVAL EQUIPMENT



## WITH ALL OUR PASSION FOR PRECISION: WE ARE SANDER

Quality, service and market-oriented product development, these are the principles with which we meet the requirements of our customers.



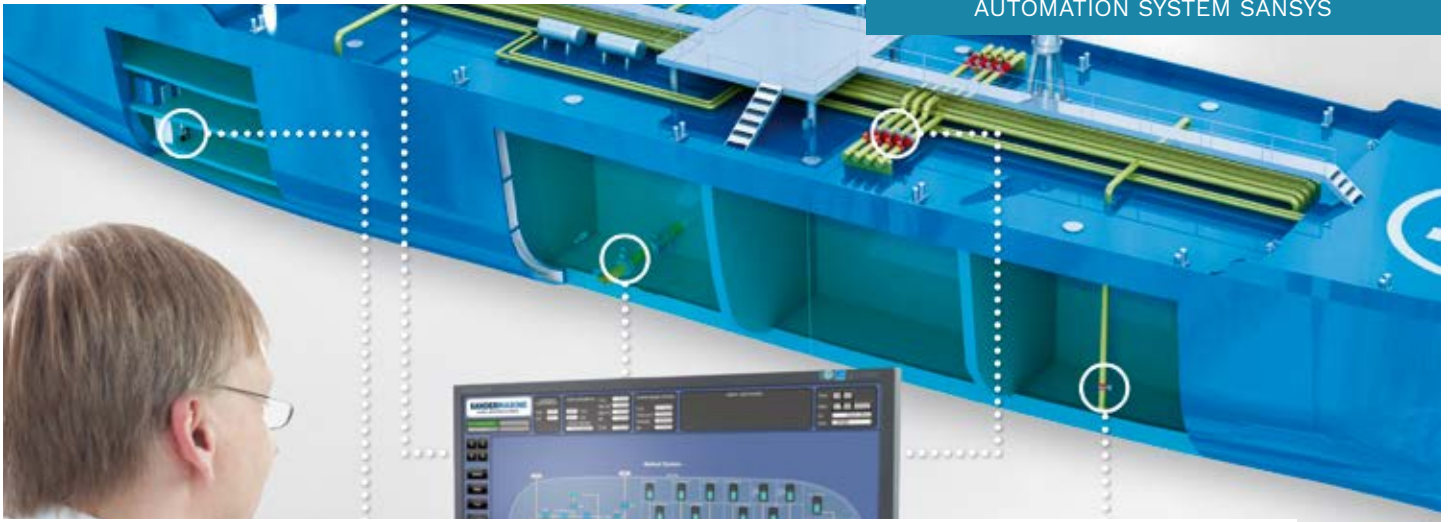
Since 1929 we have been developing standard and individual solutions for navy, marine and offshore, from a simple valve to the complex automation of piping and tank level systems.

In Bremen (Germany) we develop and produce our customised solutions out of standard components – thus user friendliness for the operation from software to procurement of spare parts is secured.

### At SANDER's you get single-source solutions:

From consultancy and development via programming to start-up and maintenance. You can keep the focus for the important tasks: your next profitable project. Owners and shipyards all over the world rely on SANDER – numerous type approvals of major classification societies speak for us.





## NO COMPROMISES: GERMAN ENGINEERING FOR THE SHIP'S INSIDE

At SANDER we consider it a science to connect our products with a system intelligence that meets our own high demands.

Due to the fact that our customers' needs can hardly ever be met by standard solutions, we decided to develop the required systems in-house which guarantees an individual and tailor-made system for each of our clients.

This results in intelligent control systems suitable for marine, navy, offshore applications and yachts – such as (besides others):

- / remote valve control systems
- / anti-heeling system
- / ballast & bilge management systems
- / tank level gauging/draft measurement systems
- / bunker management & monitoring systems
- / ship/vessel motion management & control systems

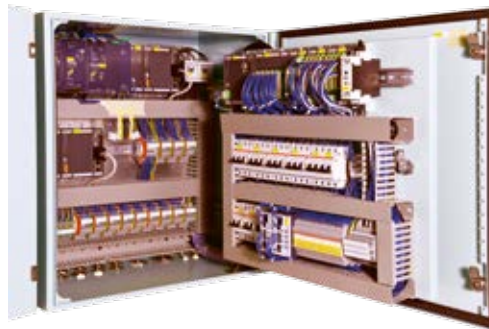




## **EASY TO INSTALL, RELIABLY OPERATING, STANDARD OR TAILOR-MADE**

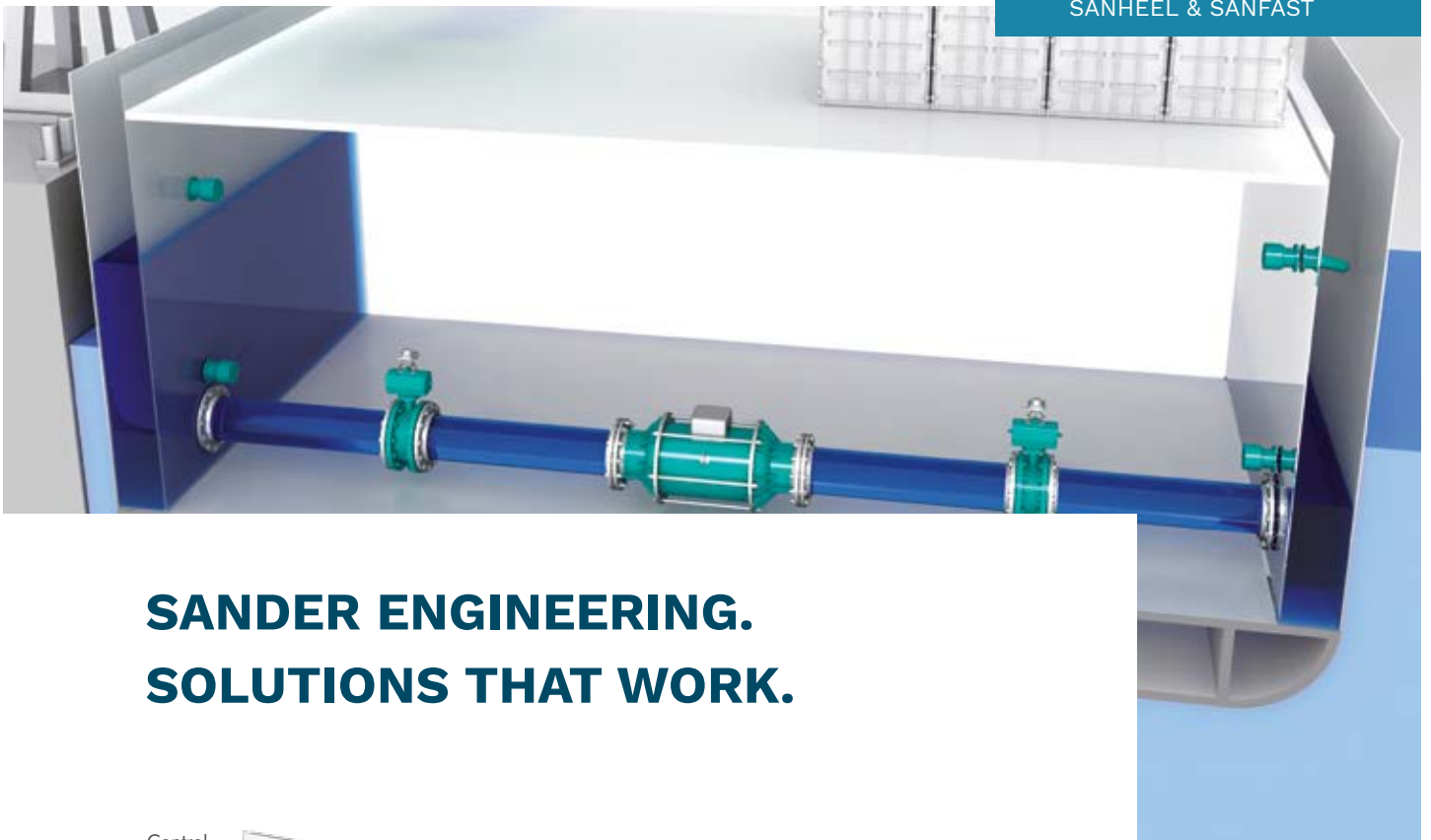
### **SANDER cabinets:**

Packed with indicators, sensors or switches our control cabinets offer numerous control options. Each cabinet will be manufactured and equipped according to the client's individual requirements.

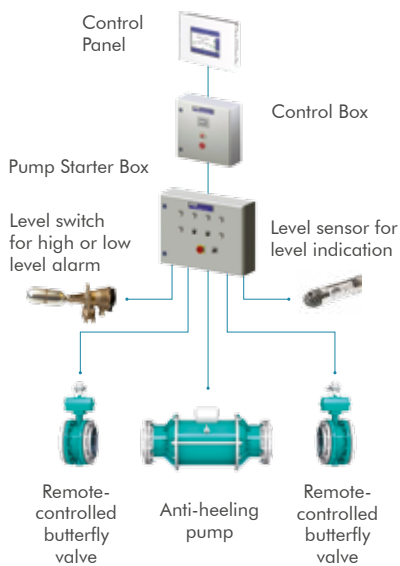


### **SANDER HPUs:**

ALL SANDER power units are designed to customer specifications and according to the required classification societies. We deliver the SANDER hydraulic power units from manual to fully automated operation, ready for connection.



## SANDER ENGINEERING. SOLUTIONS THAT WORK.



### SANDER Anti Heeling

– Keep Upright and Afloat

SANHEEL detects the heeling angle of the vessel and re-balances the ship automatically by pumping ballast water from starboard to port-side or vice versa.



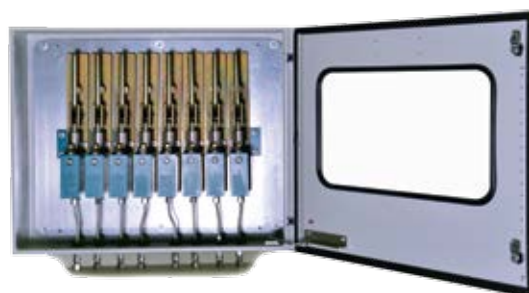
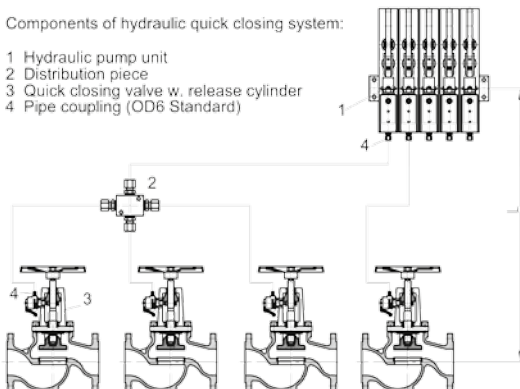
### SANDER Quick Closing System

– Remote Operated Emergency System (Hydraulic or Pneumatic)

SANFAST, in case of emergency, shuts down the oil supply from the different tanks to the various consumers – from outside the engine room.

Components of hydraulic quick closing system:

- 1 Hydraulic pump unit
- 2 Distribution piece
- 3 Quick closing valve w. release cylinder
- 4 Pipe coupling (OD6 Standard)







## SANDER IS YOUR RELIABLE PARTNER FOR COMPONENTS, SPARE PARTS AND SERVICE

### SANDER ACTUATORS:

At SANDER's you get all required valve actuators for the operation of your ship. Hydraulically, electro-hydraulically, pneumatically and electrically driven.

### SANDER VALVES:

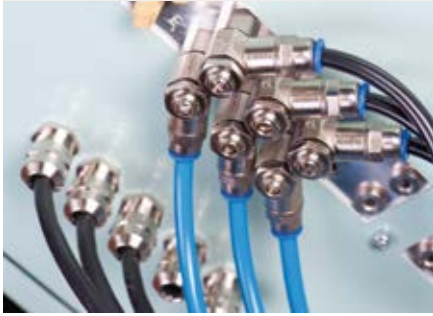
Be on the safe side with SANDER valves – engineered and manufactured for a broad spectrum of applications at our Bremen headquarter since 1929. The SANDER product range includes all VG-standard valves as well as valves according to NES-standard and up to highest submarine requirements and specification.

### SANDER SENSOR TECHNOLOGY:

Differences in density and chemical composition of the liquids to be managed require a special sensor technology. SANDER provides you with the sensors you need for your individual flow management solution.

### SANDER HYBRID CABLE:

With the flexible hybrid cable for pneumatic systems you will save costs and be efficient: Install cables and pipes in one step!



## HIGHEST QUALITY – FROM PLANNING TO ON-SITE IMPLEMENTATION

When it comes to engineering and supply of naval, marine and offshore equipment, no compromise is acceptable concerning quality and reliability. In order to ensure constant quality we are able to carry out extensive testing procedures on demand – such as:

- / shock resistance
- / noise and vibration tests
- / antistatic tests
- / acceptance and function
- / pressure tests
- / material inspection
- / x-ray



# A SELECTION OF SANDER PROJECTS



## E-SHIP I

OWNER: Enercon

SANDER Marine supplied: valves, remote control system, tank measurement system and loading calculator.

## BBC CITRINE

OWNER: Reederei W. Bockstiegel

SANDER Marine supplied: valves, SANSYS remote control & tank measurement system, SANHEEL anti heeling and loading calculator.

## FPSO SEVAN VOYAGEUR

OWNER: Sevan Marine Norway

SANDER Marine supplied: valves, remote control system for ballast, seawater cooling, fire seawater, cargo, bilge.

## INS Vikrant, P71

OWNER: Indian Navy

SANDER carries out an important order about valves and complete valve automation systems for an aircraft carrier.

**SANDERMARINE**  
MARINE + OFFSHORE EQUIPMENT

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**Indutrade**

INDUTRADE is a Swedish industrial group that conducts development and sales of high-tech components, systems and services. To date, some 200 members, among them SANDER MARINE and SANDER NAVY, contribute to the technical excellence and a strong customer focus.

SANDER is your global one-stop shop from the initial plan to on-site fitting for valves, actuators and complete remote valve control systems. When you think of flow technology, think of SANDER.