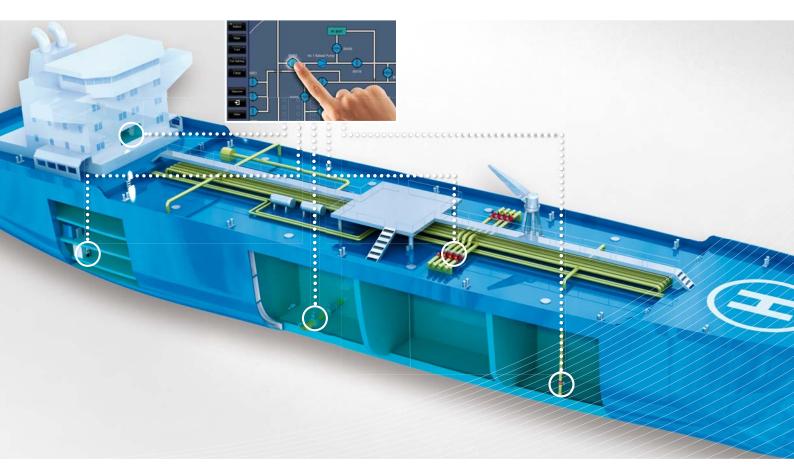




SANSYS THE MASTERMIND









With an engineer's mindset: SANSYS was developed by our most experienced experts.

ONE FOR ALL - OUR MASTERMIND.

Every system is different and different questions need different answers.

Our highly complex SANSYS heralds a new era in tank gauging, valve operation, pump operation and tank management.

Tailor-made. Flexible. Type-approved.

We call SANSYS our "Task Carrier", because with SANSYS on board you are in the position of full control over the system while SANSYS makes sure that tanks are filled or discharged, that valves and pumps are working precisely, that you get information about tank contents, temperatures and pressures.

SANSYS communicates with other systems such as anti-heeling, alarm monitoring system and loading computer.

Every SANSYS component, i.e. computer, monitors, processors and field bus modules are accepted by major classification societies.

BECOME MORE EFFICIENT. PROTECT YOUR INVESTMENT.

Market conditions compel ship owners to become more efficient with reduced staff on board. This calls for a safe and reliable automatic control and monitoring system for the ship.

- With SANSYS you move from reactive to proactive:

 Prevent faulty operation and breakdown caused by human errors.
- SANSYS provides universal redundancy and network redundancy.

 The system does its job even in case of disconnection or collapse of main components.

SAFE, EASY, COMPREHENSIVE: FIND OUT ABOUT THE AMBITIOUS FEATURES OF SANSYS.

CPU redundancy – hot standby

- Both processors work synchronously.
- Hitless switching

Software redundancy – hot standby

- Automatic system comparison
- Time synchronization
- Automatic failover

Network redundancy

- Double safety of all lines and cables
- Protects against failures in the communication structure
- Switching time is less than one PLC cycle
- · Cyclic and acyclic communication
- Integrated diagnostic function

Power supply redundancy

- · Automatic or manual switch
- Protection against overvoltage of all devices

Full Parameterization

- All project related data can be parameterized
- No reprogramming of changes necessary

Visualization

- Runs on any browser no additional software needed
- Scalable vector graphics screen resolution is irrelevant

Remote service

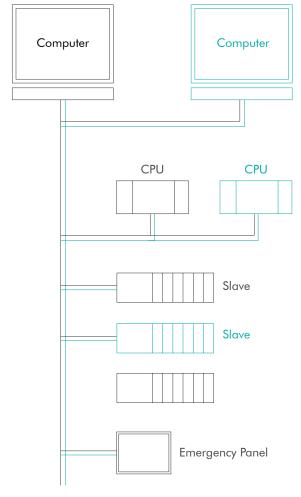
• System status can be transferred to SANDER for analysis

Comprehensive information

- Product information about all installed components
- · Operating and maintenance manuals of all products

Easy commissioning

· Commissioning with tablets



SANSYS - Universal Redundancy



DISCOVER SANDER EVOLUTION.

When it comes to system evolution, we at SANDER do not compromise. Our dedication to constantly improve our technical and electronic efficiencies is ensured by the knowledge and expertise of our experienced engineers.

Our clients' requirements helped us to create an expanded version of SANSYS.

NOW AVAILABLE: SANSYS RELOADED.



| BUSINESS ACTIVITIES | | | |
|---------------------|-------------|-------------|------------|
| | | | |
| CONSULTING | ENGINEERING | MANUFACTURE | SERVICES |
| → | → | → | → |
| INTELLIGENCE | CREATIVITY | PERFECTION | EXCELLENCE |

SANDER ENGINEERING. SOLUTIONS THAT WORK.

No matter how big or complex your liquid and gas management project, SANDER provides turnkey, computer-controlled and completely automated solutions, construction and installation services for the entire equipment we manufacture and provide. Our staff is committed to satisfying our clients' most exacting requirements.

WE BUILD MORE THAN INTELLIGENT AUTOMATION SYSTEMS – WE BUILD RELATIONSHIPS.



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