

SMST



PRODUCT OVERVIEW

DESIGN & CONSTRUCTION OF OFFSHORE EQUIPMENT: GANGWAYS | CRANES | DRILLING | PIPELAY | SPECIALS



WORLDWIDE OPERATIONS



ABOUT THE COMPANY

SMST, situated in Drachten (the Netherlands), is an internationally-oriented company that designs and builds offshore equipment. The SMST products cover a wide range of systems for access, lifting, drilling, pipelaying and specials.

Through the unique combination of our in-house design and engineering expertise, production facilities, testing capacity, worldwide installation and service, SMST is able to deliver high quality engineering and product solutions that are developed to customer's specifications.

All our products are designed and built in accordance with the international standards and are certified by recognized authorities such as DNV, LRS, BV and ABS. As for all our products, our focus is to deliver systems with superior functionality and quality.

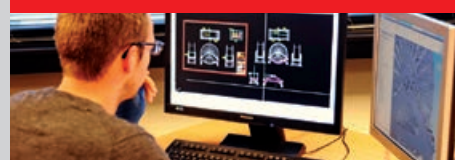
To meet the specific needs of our clients, our product range is constantly evolving. SMST constantly challenges technical possibilities, with approximately 150 employees who are given the opportunity to grow with the developments of the company.

SMST delivers complete, turnkey systems and innovative solutions by handling all projects in-house:

CONCEPT & PRODUCT DEVELOPMENT



DESIGN & ENGINEERING



MANUFACTURING & PRODUCTION



COMMISSIONING, SERVICE & AFTERSALES



MODULAR SETUPS

All SMST's products have a modular-based design philosophy. The complete product range comprises modular components that turn into systems that fit all project-specific requirements. Offering the client maximum operational flexibility.

INNOVATIVE SOLUTIONS

We are constantly working on new solutions and systems which we believe add value to the market's existing technologies. These innovations are implemented into many of our products.

As we have extensive operational experience with a wide variety of heavy construction equipment, we are able to use the best solutions for new products and projects. Our internal disciplines include Mechanical, Structural, Naval, Hydraulic, Electrical and Software Engineering.

RENTAL

Rentals for short and long term projects

SMST provides a broad range of offshore equipment rentals within the offshore industry. Not only are our offerings comprehensive, our systems also rank among the best in the industry in terms of quality and performance.

The equipment is developed in such a way that it can be operated by your own crew. For the complete rental fleet, SMST also provides a training course for all our equipment. The right knowledge and the right skills are required to operate in a safe, controlled and certified manner.

When you need a solid temporary solution, SMST has the equipment you want to get the job done.

❶ MORE INFORMATION: WWW.SMSTEQUIPMENT.COM

OUR STRENGTHS

- ✔ In-house development
- ✔ Modular setups for complete product range
- ✔ Active and passive motion compensation systems
- ✔ Cost-effective
- ✔ Ease of mobilization and transportation
- ✔ Worldwide availability
- ✔ Service under SMST coverage worldwide, 24/7 support

PRODUCT OVERVIEW



OFFSHORE CRANES



OFFSHORE ACCESS



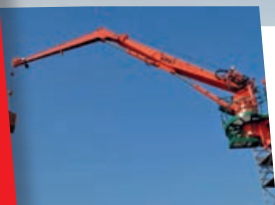
DRILLING EQUIPMENT



PIPELAY EQUIPMENT



SPECIALS



SIZE S



SIZE M



SIZE L



SIZE XL



OFFSHORE CRANES

An SMST offshore crane is designed for a wide range of deck and off-shore operations. Vessels equipped with a crane from the SMST range are capable of handling, lifting and lowering equipment under rough sea conditions. The Active Heave Compensation System installed on the crane compensates the vertical motions of the vessel. All our off-shore crane solutions are based on technology proven through years of experience and meet the latest offshore regulations.

MODULAR SETUP

To offer flexibility, SMST delivers a wide range of offshore cranes based on a modular setup. Depending on preference or the specific task of the crane, a combination of crane and winch type can be selected. Winches can be delivered in various sizes and configurations. From a small winch for deck-handling up to ultra-deep-water winches (3000 m). The cranes can be outfitted with different configurations: knuckle boom, telescopic boom, fixed boom or 3D motion compensated knuckle boom.

The modular design, enabling the exchange of booms by turning a subsea or heavy lift knuckle into a 3D knuckle, maximizes the operational flexibility of the crane even more.



FEATURES

- ✓ Compensation of vessel motions by means of Active Heave Compensation or 3D Motion Compensation
- ✓ Lifting range from 5t up to 150t
- ✓ Controls via Remote Control Unit or from control cabin
- ✓ Modular-based design
- ✓ Certified for personnel lifting
- ✓ AOPS & MOPS
- ✓ Auxiliary winch
- ✓ Remote Access System
- ✓ Knuckle (subsea or heavy lift) can be easily exchanged with modular 3D knuckle for maximum operational flexibility

STANDARD RANGE

SERIES	SIZE S	SIZE M	SIZE L	SIZE XL
PEDESTAL DIAMETER	1300mm	1800/2200mm	2600mm	3200mm
MAX. OUTREACH	20m	25m	35m	45m
MAX. SWL	25t	50t	100t	150t
MAX. WATER DEPTH	3000m	3000m	3000m	3000m
SWL 3D MOTION COMPENSATED KNUCKLE	n/a	1-5t	1-10t	5-20t



3D MOTION COMPENSATED CRANES

The SMST Motion Compensated Crane (MCC) is designed to be mounted on Service Operation Vessels and Walk-to-Work Vessels.

In harsh conditions, the Motion Compensated Crane safely transfers equipment to an offshore structure. The vessel motions are compensated in all directions by means of the 3D motion compensated knuckle. The main application of the crane is to move tools, small generators, spare parts and containers to offshore wind turbines and substations. As there is only limited space on the platforms, it is important that the crane can position the load on the drop zone, even while the vessel is moving due to waves and current. The modular setup of the crane allows the 3D knuckle to be exchanged with a subsea knuckle for deep-water operations.

FEATURES

- ✓ Large operational window
- ✓ Significant wave height up to Hs 4.5
- ✓ Safe cargo handling
- ✓ Compact knuckle design for operating around wind turbine
- ✓ Active motion compensation
- ✓ Excellent lifting capacity for platform, ship to ship, man riding and harbor lifts
- ✓ Low power consumption



ACCESS & CARGO TOWERS

The Access and Cargo Tower (ACT) is designed to ensure safe and efficient transfer of personnel and goods to the offshore wind turbines or offshore platforms.

The ACT is a modular system package complete with motion compensated gangway, tower with elevator and crane in various configurations. The integrated system enables stepless transfer of personnel and cargo from multiple deck levels up to the turbine platform. To ensure comfortable crossing and maximum workability, the height of the Telescopic Access Bridge (TAB) can be adjusted to the landing height of the platform.

The integrated elevator has capacity for a cargo pallet and/or personnel. The elevator always stops at the access bridge level. The motion compensation system uses slewing, telescoping and luffing movements to compensate the movements of the tip of the bridge. Compensation can be active as well as passive. Optionally, a windfarm cargo crane or 3D motion compensated crane can be installed at the side or top of the tower.



SMST Access & Cargo Tower on board OSV Acta Centaurus

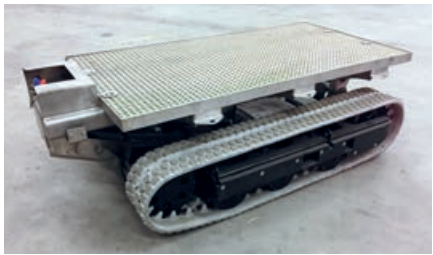


OSV Esvagt Albert Betz with Access & Cargo Tower

FEATURES

- ✓ Stepless crew & cargo handling from below deck up to the wind turbine
- ✓ Complete solution comprising elevator, motion compensated gangway and crane in various configurations
- ✓ Suitable for starboard & portside operations
- ✓ Controls via Remote Control Unit or from vessel bridge
- ✓ Active motion compensation by motion-reference unit
- ✓ Integrated with vessel-dynamic positioning system
- ✓ Lowest power consumption in the market
- ✓ Autonomous features like auto connect and assisted landing
- ✓ Gangway monitoring system on vessel bridge
- ✓ Remote access and data storage, visualization and reporting system

CARGO HANDLING OPTIONS



CRANES

- ✓ 3D motion compensated crane
- ✓ Cargo top crane

LIFTING WINCH

- ✓ Cargo capacity: up to 4000 kg
- ✓ Cargo lifting via winch below bridge tip

CARGO TRANSPORTERS

- ✓ Cargo handling with flatbed configuration or cargo pick-up system
- ✓ Cargo capacity up to 800 kg



GANGWAYS

TELESCOPIC ACCESS BRIDGES (TAB)

SMST provides a wide range of Telescopic Access Bridges (TAB) for safe and easy transfer of personnel and cargo to and from an offshore structure. Smart design has resulted in lightweight bridges and low power consumption.

SMST offers a range of Telescopic Access Bridges: S, M, L and XL, varying in length from 4 up to 58m. The bridges can be actively or passively motion compensated and are available for purchase. The M and L-Series are also available for rent.



RANGE (standard)	SIZE S	SIZE M	SIZE L1	SIZE L2	SIZE XL
LENGTH	4-12m	13-21m	15-25m	15-30m	28-58m
MOTION CONTROL	Passive/Active Motion Compensation	Active motion compensation	Active motion compensation		Passive Motion Compensation
VESSEL TYPE	13.5m and 24m Fast Offshore Craft, Walk-to-Work vessels	Various vessels, incl. Walk-to-Work vessels	Accommodation units, Walk-to-Work vessels		Accommodation units, work vessels
APPLICATION	Quick respond Walk-to-Work	General support, offshore windfarms	Crew transfer and utilities supply, offshore windfarms		Crew transfer and utilities supply

GANGWAY FEATURES

IMPROVED VESSEL OPERATIONS

- ✓ High workability, significant wave heights up to Hs 4.5m, high system speeds, longer telescopic stroke
- ✓ Minimum deck space required
- ✓ Low weight
- ✓ 50% power reduction due to advanced energy saving system
- ✓ High level of safety features
- ✓ Data storage, visualization & reporting system
- ✓ Gangway monitoring system on vessel bridge
- ✓ Gangway automation packages



FULL PROJECT SUPPORT

- ✓ Project-specific workability analysis
- ✓ Vessel-interfacing engineering
- ✓ Remote-access system
- ✓ Operator training on training facility on site
- ✓ Worldwide 24/7 support
- ✓ Direct availability of capital spare parts from SMST stock
- ✓ Service framework agreement with lifetime support and upgrade possibilities



SIZE
M & L
ALSO AVAILABLE
FOR
RENT

FLEXIBILITY

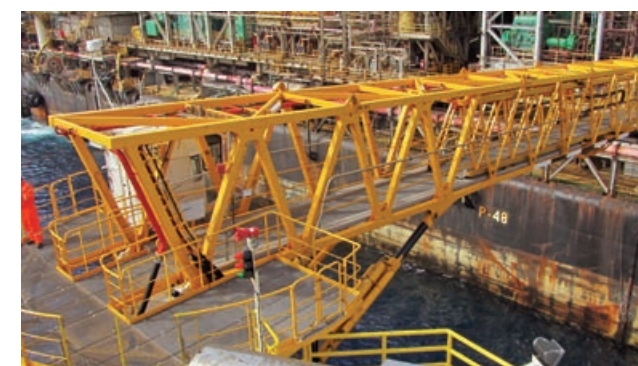
- ✓ Rental fleet, for short & long durations
- ✓ Modular setups
- ✓ Stacking modules, pedestal or A&C tower solutions
- ✓ Continuous flow of cargo & personnel
- ✓ Attractive financial solutions



CARGO HANDLING



- ✓ Safe and efficient cargo handling via lifting winch on bridge tip and/or via cargo transporters
- ✓ Also available for rental setups



SERIES		SIZE S	SIZE M	SIZE L1	SIZE L2	SIZE XL
LIFTING WINCH		n/a	300kg	1000kg	4000kg	n/a
CARGO TRANSPORTER	FLATBED	n/a	n/a	800kg		800kg
	CARGO PICK-UP SYSTEM	n/a	n/a	400kg		400kg

GANGWAY MODULAR SETUP

Since jobs and vessels vary all the time, SMST wants to offer you flexibility. It has developed Telescopic Access Bridges comprising modular components.

SMST's configurator takes us into the modular-based setup, which enables you to set up a TAB that meets all project-specific requirements, while the system is composed of standard components. A step-by-step guide helps in configuring the right TAB. Note that the module choices that are offered are specification and/or cost drivers. Lower-specified components are less costly than the higher-specified kind of component. If you keep this in mind, selecting the components that fit the requirements becomes an easy job.

FEATURES

- ✓ Containerized footprint
- ✓ Easy and quick worldwide mobilization
- ✓ High workability through active motion compensation
- ✓ Operated by the vessel's own crew
- ✓ Suitable for cargo handling, via lifting winch on bridge tip, cargo travel system or cargo transporter
- ✓ Working on various heights with stacking modules or height adjustment system
- ✓ Lightweight with low power consumption
- ✓ Low mobilization costs and attractive day rates
- ✓ Immediately available and applicable worldwide
- ✓ Suitable for various vessel types
- ✓ Responsive to market's developments

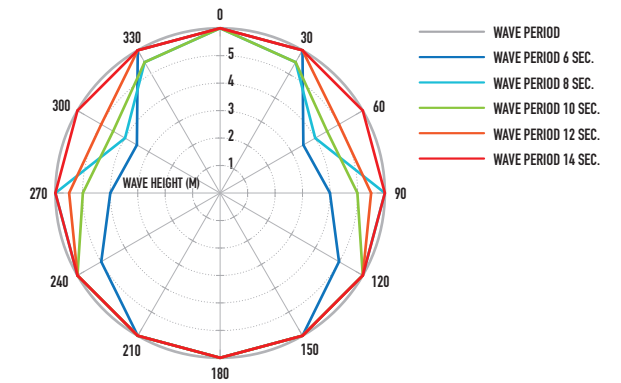


SMST TAB-L on board DEME's first SOV with SWATH design

WORKABILITY

Every vessel has its own motion characteristics which result in compensation movements of the TAB. The system's operational window must be consistent with the area in which operations need to be performed and with the vessel on which it is placed. Therefore, SMST has developed tools that indicate how well the TAB can perform on a vessel in a real operational situation.

On request, a workability analysis can be performed for every specific vessel and operational situation.



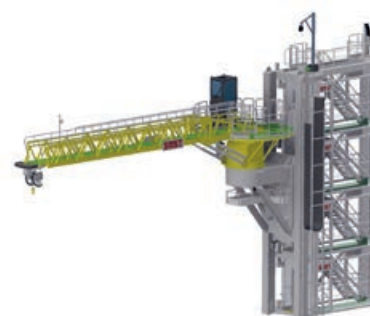
BUILD-UP EXAMPLE



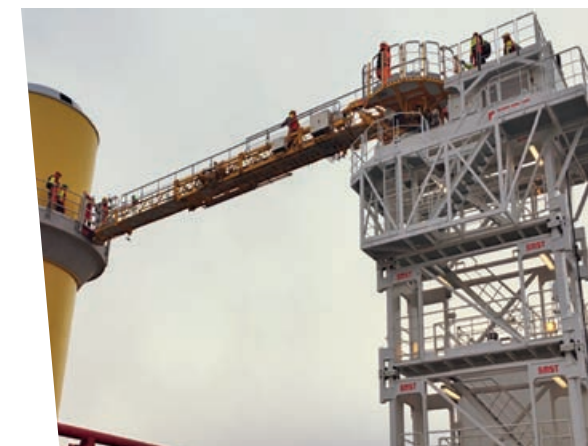
Fixed setup



Setup with stacking modules for various heights



Height Adjustment System with rail attached to stacking modules





DRILLING EQUIPMENT

SMST offers a wide variety of drilling equipment and is dedicated to exploring and putting into practice new solutions to improve drilling operations. Our projects are typically complex and innovative, requiring solution-oriented thinking, technical excellence and partnerships with our clients.

SMST has a broad range of drilling systems which are suitable for various handling and drilling operations. Examples of deliveries are shown in the overview below, which gives you an impression of the wide possibilities of our modular drilling systems and pipe-, riser-, BOP handling and skidding systems.

MODULAR DRILLING SYSTEMS

SMST's Modular Drilling Systems exist of complete systems and sub-systems for the drilling industry. The modular setup of the drilling systems offer maximum operational flexibility.

A SELECTION OF AVAILABLE MODULES:

- ✓ Automated pipe handling systems
- ✓ Pipe handling with remote control
- ✓ Single and dual winch drawworks setup
- ✓ Iron roughnecks
- ✓ Mud systems
- ✓ Utility winches
- ✓ Autoslips for various pipe diameters
- ✓ Seabed frame & handling systems
- ✓ Riser handling systems
- ✓ BOP handling systems
- ✓ Skidding systems

APPLICATIONS

- ✓ Geotechnical drilling, coring & sampling
- ✓ Well intervention
- ✓ Plug and abandonment
- ✓ Subsea mining top-hole drilling
- ✓ Wireline operations
- ✓ Compensated coiled tubing
- ✓ Side tracking
- ✓ Modular lifting activities
- ✓ Anchoring
- ✓ Soil sampling



PRODUCT EXAMPLES

SIZE S

SIZE M

SIZE L

SIZE XL

PIPE-HANDLING SYSTEMS

SMST provides a diverse range of pipe-handling systems:

- ✓ Pipe-handling cranes
- ✓ Pipe-handling manipulators
- ✓ Catwalk machines
- ✓ Pipe grippers



RISER-HANDLING SYSTEMS

For riser handling, SMST has designed and built the following systems:

- ✓ Riser-gantry cranes
- ✓ Riser-handling systems
- ✓ Riser transporters



BOP HANDLING & SKIDDING SYSTEMS

For BOP handling, SMST has developed various systems:

- ✓ BOP cranes
- ✓ BOP c-cart
- ✓ Skidding systems



FOUNDATION OPTIONS



SKID MOUNTED

System set up directly on main deck or on skids for fast mobilization between vessels.



DRILLING DECK ON LEGS

System on legs with seabed frame handling and deployment on main deck.



TRAILER MOUNTED

Trailerised (sub-)system for fast rig moves and easy transport.



PIPELAY EQUIPMENT

SMST offers a wide variety of pipelay equipment. Generally, the complexity of our projects and their innovative character require solution-oriented thinking, technical excellence, creativity and a passion for innovation. We can provide both standardized and customized pipelay systems, like PLET handling systems, workstations, spooling systems, etcetera.

An overview of SMST pipelay systems is shown below. This general overview gives an impression of SMST solutions, designed for improvement of a broad range of pipelay operations.

PRODUCT EXAMPLES

SIZE S

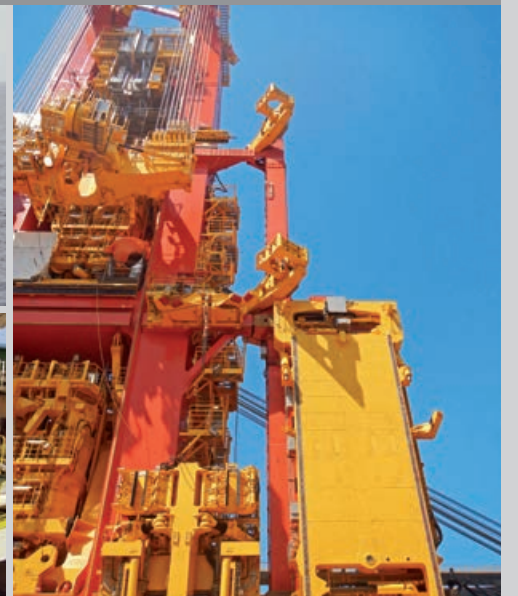
SIZE M

SIZE L

SIZE XL

PLET HANDLING SYSTEMS

SMST has designed and built PLET handling systems for multiple pipelay vessels, covering a wide range in capacity.



WORKSTATIONS



PIPE SPOOLING SYSTEMS



SMST has delivered workstations for various pipelay and construction vessels.

Delivery of land spool base equipment: level winders, reel-drive systems and hydraulic power units.

Delivery of rigid pipe reel spooling system: spooling tensioner system, spooling device and pipe support system.

SELECTED PROJECTS

SMST has been awarded various contracts for the delivery of its offshore equipment, resulting in an excellent track record. Our motion compensated gangways, access & cargo towers and motion compensated cranes enable safe transfer of personnel and cargo.

A few selected projects:

GANGWAY M SERIES (RENTAL)



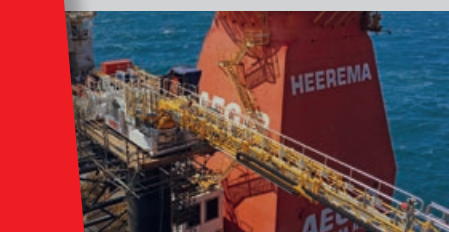
Client: Olympic Shipping AS
Vessel: Olympic Taurus, Olympic Delta
Area: Various wind farms in North Sea
Setup: 3 up to 4 stacking modules
Remarkable: Various long term projects



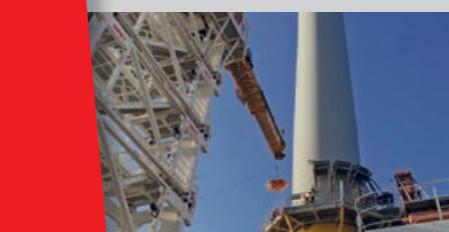
Client: Allseas
Vessel: Oceanic
Area: Ninian Northern platform
Setup: 5 stacking modules
Remarkable: Decommissioning project (oil & gas)



Client: Simon Møkster Shipping AS
Vessel: Stril Server
Area: Various wind farms in North Sea
Setup: 1 up to 3 stacking modules
Remarkable: Cargo winch below bridge tip



Client: Heerema Marine Contractors
Vessel: Aegir
Area: Kotter and Logger platforms
Setup: Adapted to existing pedestal
Remarkable: Decommissioning project (oil & gas)



Client: REM Offshore AS
Vessel: REM Inspector
Area: Various wind farms in German North Sea and Baltic Sea
Setup: 3 up to 6 stacking modules
Remarkable: Highest set up so far, with cargo winch



Client: SEACOR Marine LLC
Vessel: Liam J. McCall, SEACOR Cheetah, SEACOR Lynx
Area: West Africa
Setup: Direct on deck
Remarkable: First gangway operational on Fast Support Intervention Vessels (FSIV)

Nils A. Liaaen,
Chief commercial officer: “Møkster has used the SMST gangway at several projects for different clients and has very good experience with both the gangway and the SMST organisation. In addition it is worth mentioning the efficient one-day mobilisations we have conducted in good cooperation with SMST.”

ACCESS & CARGO TOWER (ACT)



Client: Acta Marine
Vessel: Acta Auriga
Area: Wind farms in North Sea and Baltic Sea
Setup: ACT with 6t motion compensated crane
Remarkable: First operational ACT in the market



Client: ESVAGT
Vessel: ESVAGT Albert Betz
Area: Deutsche Bucht offshore wind farm
Setup: ACT with 3t active heave compensated crane
Remarkable: In operation for 15-year long contract



Client: Acta Marine
Vessel: Acta Centaurus
Area: Various wind farms in North Sea
Setup: ACT with 6t motion compensated crane
Remarkable: Complete solution of mission equipment for maximum flexibility



Client: Bibby Marine Services
Vessel: Bibby Wavemaster Horizon
Area: Hohe See and Albatros wind farm
Setup: ACT with 3t motion compensated crane
Remarkable: Meets customer requirements for an integrated system

Mark Whitehead,
Commercial manager: “We at Bibby have found the SMST gangway and crane to be of a very high spec that fits our customers needs. The support and training provided by SMST has also been of the highest standard and we look forward to working with them in the future.”

MOTION COMPENSATED CRANES (MCC)



Client: Østensjø Rederi AS
Vessel: Edda Passat, Edda Mistral
Area: Race Bank and Hornsea offshore wind farm
Capacity: 1t motion compensated crane
Remarkable: First modular MCC in the market



Client: Vroon Offshore Services
Vessel: VOS Start, VOS Stone
Area: Various offshore wind farms
Capacity: 5t motion compensated crane
Remarkable: easy exchange of 3D knuckle between 50t subsea cranes of both vessels



Client: Acta Marine
Vessel: Various wind farms in North Sea and Baltic Sea
Area: Deutsche Bucht offshore wind farm
Capacity: 6t motion compensated crane
Remarkable: MCC with 20t harbor capacity



Client: Bibby Marine Services
Vessel: Bibby Wavemaster Horizon
Area: Hohe See and Albatros wind farm
Capacity: 3t motion compensated crane
Remarkable: In operation for 10-year charter



SERVICE & AFTERSALES

SMST cares about its clients and wants to be recognized as a company which delivers what it promises. High-quality solutions, competitive pricing, services and trainings are key in this process. We are continuously improving our products and services for the purpose of aligning them to the latest industry standards and are always looking for new innovative solutions which may bring the industry to its next level of success.

MAINTENANCE

Projects don't stop after they have been delivered.

Systems will require the right maintenance to keep them in reliable working order. SMST understands this and provides equipment with the right maintenance schedules to prevent unexpected breakdowns. Besides that, SMST can provide service all over the world to perform regular maintenance to keep the equipment in excellent shape and avoid downtime.

SPARE PARTS

The availability of high-quality original spare parts is vital for long-term safe and proper functioning of the equipment.

We can provide you with all the spare parts you need. Based on our experience, we can assist you in making the right choices in selecting spare part packages throughout the lifetime of the equipment.

UPGRADES

The jobs that a vessel and its equipment need to do can change over the years.

SMST offers a range of services to upgrade your equipment customised to your requirements. Our modular approach gives us the opportunity to upgrade existing products to higher specified equipment which is perfect for your new job.

SERVICE FRAMEWORK AGREEMENTS

SMST can also take over responsibility for service, maintenance, spare parts and training by establishing a service framework agreement.

While such an agreement relieves the owner of the responsibility for maintenance, it ensures the availability of vital spare parts in the facility in Drachten. SMST stands for the quality of its products and can extend the guarantee period accordingly.

REVIEW

Client: Nederlands Loodswezen B.V.
Vessel: Procyon
Delivery: Multiple davit systems

'We are glad to have SMST as a valued partner! And we hope to continue working with SMST, for many years to come, as pleasantly and professional as we have done over the past years.'

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TRAINING

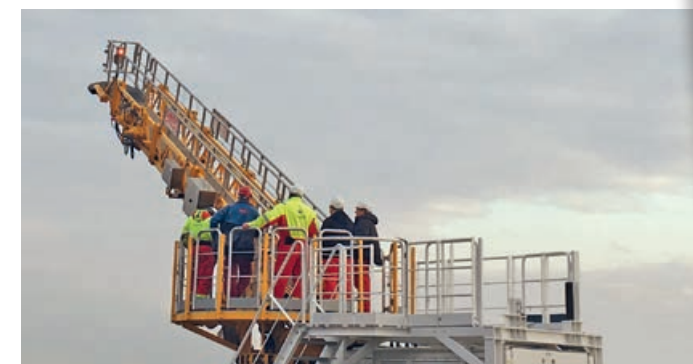
SMST can provide a training course for all our equipment, both relating to our rental fleet products and the systems we sell. We always want to provide you with the right knowledge and skills as to how to operate the equipment in a safe and controlled manner.

- ✓ SMST Technology Training
- ✓ General Gangway Operator Awareness Training
- ✓ Simulator Training
- ✓ E-learning

CAREERS

Our people are at the core of our success. As our projects are highly complex and innovative, they require solution-oriented thinking, high level technology, creativity and ownership from all. Therefore we are always on the lookout for talented and ambitious team players. If you share our ambition to be innovative, dedicated and successful, SMST has a lot of opportunities for you.

Visit www.smstequipment.com to find out more about our job opportunities, internships and more.







SMST

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