SMS-SME is a leading technology-based company, engineering and supplying various dry cargo access / securing equipment such as Hatch Covers, Lashing Bridges and Ro-Ro Equipment as main products to shipyards in Korea, China, Japan, Taiwan, India and USA. The delivery record has reached more than 2,000 ships to worldwide ship owners and users.

The supply range of Hatch Covers is not limited but available for various vessels up to DWT 400,000 Bulk Carriers, and up to 20,000TEU of Mega container ships owned by World-Wide major ship owners and operators, and the range of Ro-Ro system includes 8,700 unit PCTC and Ro-Pax.

SMS-SME produces about 5,000 tons steel structures per month at Mokpo factory which has 150,000㎡ area including large in-factory paint shop with about experienced 450 employees under the quality control of ISO 9001:2009 DNV GL. SMS-SME components are usually genuine Korean, European and Japanese origin, so as to offer long life and reliable products. The prompt after-sales services are also ready from head office, factory and worldwide service networks.

SMS-SME is moving forward with the Strengthened Strategy of Full Satisfaction of Customers by close hearing of customer’s requests, offering the customized engineering / design and high quality products as well as quick action & full service from the beginning of the project to operation after delivery.

SMS-SME website is always available at www.sms-sme.com for more information and guidance.
SMS-SME is the most experienced, comprehensive and trusted turnkey supply company of dry cargo access / securing system in Singapore. SMS-SME turnkey supply system spans the range of complete engineering, designing, raw material procurement, manufacturing, assembling, and servicing of customized systems. Expertise in all aspects of turnkey supply of dry cargo access / securing system makes SMS-SME the industry’s total system solution provider.

60,000 ton capacity per year of Mokpo factories can provide total solution from initial design to installation and completion with all products within customer’s requested time. Also, turnkey system provides our products to the shipyards with fully tested and ready to install upon delivery which can be a tremendous advantage to shipyards since it eliminates the needs for shipyards to manage the projects.

SMS-SME manages all the steps from beginning to the end, in order to match our services to customer’s needs including providing worker, supervision and delivery. SMS-SME experts analyze existing systems to identify opportunities to build up the performance and reliability. Through various projects and accumulated experiences, SMS-SME has already provided products to worldwide shipyards as a turnkey system.
Head office in Singapore

SMS-SME is operated from headquarter in Singapore and supported by a worldwide network of associate companies and agents. SMS-SME has provided innovative system solutions and products designed to meet the most exacting requirements for all type and size of the ships.

As a major supplier of turnkey equipment including engineering/design, productions and installations, SMS-SME supplies high-quality dry cargo access / securing systems to shipyards and ship owners/shipping companies in the world. So as to lead the technology of the system through innovative improvement of designs focused on safety, comfortable operations and cost saving, SMS-SME actively participates in leading-edge industry research program and technical committees. Improvement work is currently refining system designs to meet future demands for safe, economical and environment-friendly shipbuilding and ship operations.

Last 25 years, SMS-SME has always served customers with state-of-the-art technology as a technical partner and has now pride of the works because most of customers were very satisfied with the quality and the performances of the systems. SMS-SME in particular built up a good reputation with delivery of good products to shipyards and ship owners. With the aim to work closely to customers, SMS-SME always makes every effort to provide intelligent and innovative solutions that will improve the quality, safe operations and easy maintenance of the products.
As the rising demands for a complete set supply, SMS-SME operates three factories in Mokpo, at the southwest part of Korea. With these factories in Mokpo, SMS-SME offers customers complete systems from design to installations and completions, which is total solution. Through practical experiences in ship hull block fabrication and cargo access / securing systems, SMS-SME is establishing the most comprehensive and advanced production system available.

The location benefit enables customers to eliminate additional costs, liability issues and time delays. Also SMS-SME provides a reliable quality through all standard processes and guarantee the products with intended performance so that SMS-SME can be associated with multiple vendors to accomplish various part of complete tasks.

SMS-SME operates own quay/terminal near the factory for steady and safe delivery of the steel structure products within required time by the customers (Just In Time delivery each block by block).
Lashing Bridge and M&R Platform

Lashing bridges are installed on container ships and designed to restrain racking forces from container stack loads and create safe spaces for reefer container monitoring, maintenance and repair.

SMS-SME has concentrated on developing lashing bridges for
- Easy loading/unloading of containers and Hatch Covers
- Easy & Safe lashing/unlashing work of containers
- Easy & Safe access
- Easy & Safe reefer container monitoring, maintenance and repair.
- Easy installation on board

Based on SMS-SME Patent design of A-bracing type lashing bridge, new type of lashing bridge was developed which improves an operating aspects and saves the initial investment. Also, the vibration mode and natural frequency was improved to avoid a resonance from engine/propeller. The free vibration analysis was carried out and it was discussed and confirmed by several major shipyards. The new lashing bridge has finally been being applied to whole size of containerships up to mega-containerships. New type of One-side A-bracing structure can take whole lashing forces generated by container stack and ship’s motion through lashing from 1st, 2nd and 3rd or higher tier of containers, especially for mega-containerships.

SMS-SME also provides reefer container M&R (Maintenance & Repair) platforms separately or combined with lashing bridge. Reefer containers on higher tiers can be easily monitored and repaired from the platform just in front of reefer container unit.
Pontoon type Hatch covers are available as single or multi panel units with non-sequential operation by using flap sealing system.

Hatch cover structures and supporting fittings are designed to withstand very great downward forces on the container foundation from heavy container stack loads in dynamic condition up to 120 ton/20 ft, 240 ton/40 ft(45 ft) and 300 ton/Russian stowage or more, while the panel weight is limited by the capacity of the terminal crane.

SMS-SME hatch cover structure was improved to accommodate any loads, to minimize stress concentration which may be one of the reasons of local crack. The global and local structure was optimized by using modern CAE (FEM) analysis considering better productivity, less welding distortion, and minimum weight to reduce initial shipbuilding cost & operating cost by less lightweight of the ship.

Any kinds of vital components such as tightening rubber packing, bronze type, engineering plastic type support pads and non-sliding type support pads (SANDWICH pad) are available for the hatch covers for all range of container ships. The fittings were developed and improved with aim at the highest performance, reliable quality and long lifetime, and already proven through several hundred containerships.
**Hatch Cover**

**Folding type Hatch Cover**

---

**Single Folding type Hatch Cover**

SMS-SME folding type hatch covers are smoothly operated by specially designed control valves, hydraulic cylinders and rolling wheels travelling on the track way. Operation of hatch cover is non-sequential. Manual or automatic cleating system secures the panels in closed position. Weather-tightness of hatch cover is kept by sealing system.

---

**Multi Folding type Hatch Cover**

Multi-folding type hatch covers are provided to minimize the stowage space in open position. Leading pair is operated by hinged arms on the 1st end panel and the trailing pair is sequentially operated by bell crank arm. Each pair is drawn along the longitudinal hatch way and opened to its vertical position.

---

**Multi-purpose carrier Hatch Cover**

SMS-SME can also provide specially combined design & supply of folding type, tween deck pontoon type or piggy back type hatch covers on the same vessel depend on the ship’s route or cargo kind. Such combination type is adopted on the mixed cargo carrier such as bulk & container cargo, or heavy lift carrier with folding type on weather deck & pontoon type hatch cover on the tween deck cargo resulting high value performance. These hatch covers are supplied with our long time experience & genuine components.
Hatch Cover

Rolling type Hatch Cover

Rack & Pinion Driven Hatch Cover
Side Rolling type hatch covers are operated by a rack and pinion driven system which has a rack gear transversely located in the middle of the underside of each panel. A pinion gear is positioned outside of the side coaming and engaged with the rack gear. Each panel is fitted with own rack and pinion driven system to allow independent operation. Auto-roll mechanism with auto-cleats is adopted by many ship owners for easy and comfortable operation without manual cleat operation.

Chain Driven Hatch Cover
Side Rolling type hatch covers are also can operated by a chain driven system. The operating chains are connected crosswise to the arms of both panels giving simultaneous operation. One-sided operation type and both-sided operation type are available by a low speed hydraulic motor mounted on the side of longitudinal coaming. Auto-roll mechanism with auto-cleats is also available and recommendable to this type of hatch cover.

Piggy Back type Hatch Cover
Piggy Back type hatch covers are adopted on multi-purpose carriers when the available deck space is insufficient to accommodate rolling covers in open position. This system always comprises two panels as a pair, one panel is lifted high enough and the other panel is rolled underneath to support/carry on the lifted panel back. Then both panels are rolled back-and-forth. Lifting of both panels is achieved by hydraulic cylinders and rolling by hydraulic motors.
Ro-Ro Equipment
Stern / Side / Bow Equipment

Stern Ramp / Door
SMS-SME stern ramp/doors are optimized and designed to match with the ship’s dimensions and the various ranges of quay height considering the most effective operation condition. The operation of the ramp is achieved by two directional hydraulic cylinders arranged on each side. The ramp in the close position acts as a weather-tight door. Cleats and locking devices secure the ramp/door to achieve the required tightness.

Side Ramp / Door
Two or three-level side ramps allow convenient cargo access / securing under various ship drafts and port conditions. They are operated by hydraulic winches and working levels can be adjusted by jigger winches for smooth and accurate operation.

Bow Ramp / Door
Bow door is opened parallel to side shell or upwards. Detachable type bow ramp is also used as a collision bulkhead door even though another collision inner bulkhead door is necessary for conventional type. Automatic control includes sequential operation by PLC or manual control. Bridge indication is provided for the door in closed/locked condition.
Ro-Ro Equipment

Internal Equipment

Liftable Car Deck
SMS-SME has been specializing in the design of inner ramps for Ro-Ro ships and especially developed a thin car deck system which is an up-to-date car deck ramp applicable to PCTC. The thin car decks can guarantee increased stability and reduce the ship's weight so that they allow the shipyard/owner to have an optimized ship design. Standard modular systems also offer easy installation, minimal maintenance and cost saving.

Inner Ramp / Door
Several types of inner ramp/doors are provided vehicles to access between the decks or to give flexibility of vehicular mobility between two different deck levels. On large ocean-going Ro-Ro designs such as ocean going vehicle carriers and Ro-Ro container liners, it may be necessary to provide doors in any transverse bulkheads to ensure efficient cargo operations and safety of the ship in damaged condition.

Ramp Cover
Special hydraulic ramp covers are provided in order to have a reliable load distribution on various decks in the ship and/or separate the cargo area etc on Ro-Ro vessels and Ro-Pax ferries.
Ready to support you all the time with our advanced system

SMS-SME always provides ship-builders and owners with a consistent service during the entire life of ships while keeping our ear to the specific requirements from customers. Support and service activities are supervised from SMS-SME office in Singapore & Korea to service centers at strategic locations around the world.
SMS-SME Service

A/S
SMS-SME customer services are organized to provide high-quality and worldwide support whenever and wherever customer needs. For the best supports and services with SMS-SME products, SMS-SME has been building a system to minimize the response time and building up the global service network which is expanding. Through SMS-SME international network partners, SMS-SME is able to offer comprehensive and competitive technical assistant at anytime and anywhere. If needed, SMS-SME engineers are available to provide remote diagnostics, advice and service assignment planning. SMS-SME service engineers have long experience in cargo access equipment, and have dealt with situations ranging from new installations to conversions. This knowledge is used to provide the best solution to all repairing requests. SMS-SME is able to assist customers quickly and effectively with qualified engineers and high quality spare parts.

Consulting Service
SMS-SME Technical Consulting Division and Design Department has been offering consulting and customized technical assistance so as to offer advanced service to customers. The consulting service are not limited to the basic analysis of cargo loading / unloading system but extended to hull structure evaluation, strength analysis, weight calculation etc to worldwide shipyards. SMS-SME consulting service gives customers the best result of effective design for safe and economical operation as well as cost saving through high productivity, easy installation and less material etc.

Spare Parts
Timely part replacements and maintenances are important for cargo access / securing equipment operation such as Hatch Covers and Ro-Ro equipment. To support our product’s optimal operation, SMS-SME are offering main components at the best price and best quality in the shortest time. In order to achieve customer satisfaction, SMS-SME is furnished with the computerized stock monitoring and warehouse management system. Using the worldwide service network, SMS-SME can deliver any parts to clients wherever and whenever they are needed.
ASIA

SINGAPORE
[SMS-SME Pte. Ltd.] (Head office)
2 Venture Drive, Vision Exchange #07-32, Singapore
Phone +65 6904 9440
E-mail sms-sme@sms-sme.com
http://www.sms-sme.com

KOREA
[SMS-SME Pte. Ltd.]
9F, 303 Daedong-ro Sasang-gu Busan
Phone +82 315 5800

JAPAN
[Yokohama Engineering Works, Ltd.]
No.3-2 Namamugi 2-chome, Tsurumi-ku,
Yokohama, Japan
Phone +81 45 503 5111

HONG KONG
[Marico Engineering (HK) Ltd.]
Room 605A, Kai Tak commercial Bldg. 317-321
Des Voeux Road Central, Sheung Wan, Hong Kong
Phone +852 2857 7099

SINGAPORE
[Marico Engineering (s) Pte Ltd.]
21, Toh Guan Road East
#04-15/16 Toh Guan Centre, Singapore 608609
Phone +65 6861 4200

JMUS
27, Tanjong Kling Road, Singapore 628052
Phone +65 6268 7360

CHINA
[Shanghai King-Ship Inc.]
Rm.1005, No.6 Huiyang Mansion,
1139 Pudong Ave, Shanghai, China
Phone +86 21 54390199

[Shanghai Laifeng Marine Server Co Ltd.]
Rm.204-1, No.469 Guang Yue Road, Shainghai, China
Phone +86 135 6448 3609

TAIWAN
[Jing Ming Engineering Enterprises Co., Ltd.]
43, Lane 9, Shin Sheng Rd.,
Chien Chen Dist.,
Kaohsiung, 80672 Taiwan, R.O.C.
Phone +886 7 8154256

UAE
[Nico International]
PB NO 12068 Dubai
Phone +971 4 3090100

TURKEY
[MUGESAN]
Bagdat Cd. 67/5 Feneryolu 34724
Kadikoy- ISTANBUL
Phone +90 216 411 5466

INDIA
[OEM SOURCES]
A-101, Bhaveeshwar Arcade, LBS Marg,
Ghatkopar (W), Mumbai, 400 086
Phone +91 22 25006366
EUROPE

GERMANY
[Blohm+Voss Repair GmbH]
Hermann-Blohm-Strasse 2 D-20457
Hamburg, Germany
Phone +49 40 31188 0

GREECE
[SEA ERGON]
5, Zoodochou Pigis, 185 38
Piraeus, Greece
Phone +30 213 03 17 542

NETHERLANDS
[D.van de Wetering B.V.]
Bunschotenweg 134 Harbour
No.2696 3089 KC Rotterdam
Phone +31 10494 3940

ITALY
[Jobson Italia]
150, Via delle Pianazze 19136 La Spezia, Italy
Phone +39 0187 984201

UNITED KINGDOM
[Burgess Marine Ltd.]
Building no.1/209F
Old Compressor House p/p 130
Shipping Road HM Naval Base Portsmouth,
P-1 3NJ
Phone +44 2392 295489

FRANCE
[MACOR e.u.r.l.]
G.P.M.M Enceinte Portuaire Porte 4,
13344 Marseille Cedex
Phone +33 491 116350

AMERICA

USA
[L.A. Maritime Services Inc.]
327 Lecouvreur Avenue, Los Angeles, CA 90744, USA
Phone +1 310 518 1718

[B&A Marine Co.,Inc.]
75 Huntington Street Brooklyn, NY 11231 USA
Phone +1 718 875 6700

[Matthew Marine Inc.]
4001 Navigation Blvd. Houston, TX 77003, USA
Phone +1 713 227 4004

BRAZIL
[Coimbra Guindastes Ltda-Santos Brazil]
Rua Amador Bueno, 447-Santos-CEP
11013-153-Port of Santos
Phone +55 13 3222 7159

CHILE
[Haroldo Tessini]
Almte. Grau 2541 - Tte. Serrano, Quilpué
V Región, Valparaíso, Chile
P.O.Box : 096 – Quilpué
Phone +56 32 82624

OTHERS

SOUTH AFRICA
[Dormac Marine & Offshore Engineering]
1 Belfast Road Bayhead Durban, South Africa
PO Bax 12568, Jacobs, 4026
Phone +27 31 2741500

BRAZIL
[Coimbra Guindastes Ltda-Santos Brazil]
Rua Amador Bueno, 447-Santos-CEP
11013-153-Port of Santos
Phone +55 13 3222 7159

CHILE
[Haroldo Tessini]
Almte. Grau 2541 - Tte. Serrano, Quilpué
V Región, Valparaíso, Chile
P.O.Box : 096 – Quilpué
Phone +56 32 82624
SMS-SME
Systematic Cargo Access / Securing Solutions

2 Venture Drive, Vision Exchange #07-32, Singapore
Phone: +65 6904 9440    E-mail: sms-sme@sms-sme.com    Website: www.sms-sme.com