This article is published under a grant from The Nippon Foundation.



SMM

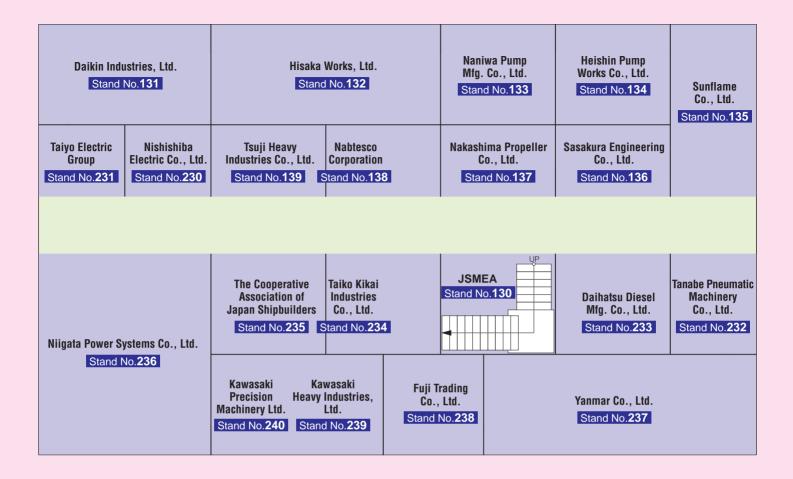
shipbuilding • machinery & marine technology international trade fair • hamburg 23 • 26 sept. 2008

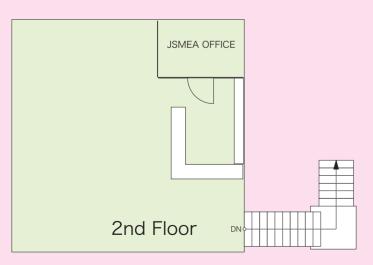
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EXHIBITORS

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JSMEA at Hall A1 The Cooperative Association of Japan Shipbuilders (CAJS), established in 1959, now has 78 member companies.

Since its founding, CAJS has been committed to modernization and rationalization of the medium-size shipbuilding industry and enhancement of its technical standards, and also endeavored to promote international cooperation. These activities have made important contributions to the advancement and development of the medium-size shipbuilding and related industries.

The members of CAJS are determined to step up their combined efforts to contribute to the development of a new system of marine transportation, which can successfully meet extensive social needs including the ever more important requirement for environmental conservation.

Details of Business Activities

(1) International Cooperation of Medium-size Shipbuilders

Since its inauguration, CAJS has surveyed shipping and shipbuilding situations in well 80 countries in the world, and compiled its findings into written reports, which serve as basic reference for the promotion of international cooperation.

(2) Development of New Types of, and New Technologies for Ships

With a view to appropriately coping with the rapid progress of technological innovation and changes in demand structure, CAJS carries out investigation and research concerning the development of new technologies.

(3) Economic Cooperation

CAJS cooperates in the promotion of economic cooperation projects implemented by the Japanese Government.

(4) Measures Regarding Labour Relations

CAJS conducts investigation and research regarding the employment, labour management, working conditions and labour safety and sanitation of member shipyards.

Tokyo Office

Kaiyo Senpaku Bldg., 15-16, Toranomon 1-chome, Minato-ku, Tokyo 105-0001, Japan Tel: +81-3-3502-2061 Fax: +81-3-3503-1479 URL: http://www.cajs.or.jp

Overseas Offices

• New York Office

JETRO New York, Shipbuilding Department 42nd Floor, McGraw-Hill Bldg., 1221 Avenue of the Americas, New York, NY 10020-1079, U.S.A. Tel: +1-212-819-7777 Fax: +1-212-944-8301 URL: http://www.jetro.org/kyodo/shipbuilding/

Singapore Office

JETRO Singapore, Shipbuilding Department 16 Raffles Quay, #38-05, Hong Leong Bldg., Singapore 048581 Tel: +65-6221-8174 Fax: +65-6224-1169

• Dalian Office JETRO Dalian, Shipbuilding Department SENMAO BUILDING 19/F, 147 Zhongshan Road, Dalian 116011, China Tel: +86-411-8360-9418 (Ext. 144) Fax: +86-411-8360-9498

Outline of Company

Since its establishment in 1907. Daihatsu Diesel Mfg. Co., Ltd. has pioneered the ages and has maintained a first rate position in the Diesel engine business. Our Diesel engines in the 50 to 7000kW range has been very popular in both the overseas and home markets, confirming Daihatsu Diesel as the leading company in this field. We believe our reputation is the result of our dedicated and consistent efforts to provide reliable products, and that it is our duty as an enterprise to uphold the Daihatsu principles and corporate attitude. Our constant efforts to achieve the highest quality can be seen in the industry-leading quality assurance systems of Daihatsu Diesel's Headquarter and Moriyama Plants, which has been certified by Lloyd's Register Quality Assurance Ltd. as satisfying the requirements of ISO9001.

Daihatsu Diesel, targeting the global market, will continue fostering a progressive business culture. Furthermore, we are fully determined to fulfill the trust and expectations of our valued customers, and to contribute to the society through technological innovations with emphasis on environmental consciousness and quality.

Main Products

Marine Propulsion and Auxiliary Diesel Engines

Tokvo Office

2-10, Nihonbashi-honcho 2-chome, Chuo-ku, Tokyo 103-0023, Japan Tel: +81-3-3279-0827 Fax: +81-3-3245-0395 http://www.dhtd.co.jp

Liaison Offices

Daihatsu Diesel (Europe) Limited 5th Floor, Devon House, 58-60 St. Katharine's Way, London E1W 1LB, U.K.

London E1W 1LB, U.K. Tel: +44-20-7977-0280 Fax: +44-20-7702-4325 E-mail: daihatsu@ddeuk.com • Daihatsu Diesel (Europe) Limited Liaison office and/or agent **WILHELM RUMP KG (GmbH & Co.)** Buchheisterstraße 6, 20457, Hamburg, Germany Tel: +49-40-3178420 Fax: +49-40-3194841 Tix: 214059 RUMP D. E-mail: spares@rump-kg.de

Features of New Model Engine

Developed as a large DC series engine, the DC-32 is reliable and strong, incorporating experiences gained in developing the DK engine, and is based on the DC series development concept.

The compression ratio is the highest of any engine in this class, and the piston combustion chamber is shaped optimally for heavy fuel oil combustion, using a highly efficient supercharger. These features ensure stable low-load combustion of heavy fuel oil.

Incorporating an optimal intake port shape, a fuel injection pump with high injection pressure, and a noncooled fuel nozzle, Daihatsu has achieved low fuel consumption by matching these features to the most suitable conditions. The DC-32 meets increasingly strict environmental regulations by using a shape enabling clean combustion based on an analysis of the combustion chamber.

Taking into operability in projected maintenance, this engine enables the power unit - cylinder head, cylinder liner, piston, and connecting rod — to be opened from the engine by one operation.

Electronic Engine Control

To make engine handling easier and reduce exhaust emission performance, Daihatsu introduces control devices such as electronic monitoring in the engine, an electronic governor, and electronic fuel oil injection device.

Low Marine Auxiliary Engine Load

Using 2 fresh-water cooling systems — a cooler and a jacket for engine cooling - Daihatsu has kept jacket cooling water at a constant high temperature. For the air cooler, Daihatsu uses 2-stage cooling in which hightemperature jacket-cooling fresh water and lowtemperature fresh water of the cooler system flow. Air is heated automatically to ensure stable heavy oil combustion at a low load.

Reliability, Durability, and Component Function

Daihatsu has reviewed the cooling water system, channel configuration, and engine lubrication, and have arranged the pump, cooler, and other auxiliary machinery in front of the engine to guard against component malfunction. The DC-32 is simple and excellent in

handling thanks to the significantly reduced number of piping and components. Advanced structural analysis has been introduced via new software for major operating sections and components. Daihatsu plans to confirm quality through continuous engine endurance operation.



DAIKIN INDUSTRIES, LTD.

DAIKIN INDUSTRIES, LTD.

Since established in 1924, Daikin Industries Ltd. has developed unique and reliable technologies in three different fields-Mechanics, Electronics and Chemistry.

Since starting mass production of packaged air conditioners in 1951, pouring effort into technological development for products, and going on developing the very first marine packaged air conditioner, we have been a pioneering force in packaged air conditioners in Japan. Our results and posture have also breathed life into the development of marine air conditioners, being useful for all people across the world.

On the other end of the spectrum, our advance onto the global stage, particularly into Thailand and America in more recent years, began in 1972 with the establishment of Daikin Europe N.V..

Now we have established more production centers around the world, total 24 bases, including Shanghai Daikin Air Conditioning in China.

Furthermore, in each of our production centers, we acquired ISO9001 and 14001 certification, the international standard in the field, in order to increase awareness of manufacturing quality assurance and environmental protection.



Main Products

- Marine type packaged air conditioner: USP, USF series
- Marine type deck unit: USDP, USDN series
- Marine type small size condensing unit: RHS, RKS series
- Marine type water chilling unit: UWS series
- Compressor for air conditioner & refrigeration

Head Office

Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome, Kita-ku, Osaka 530-8323, Japan Marine Airconditioning & Refrigeration Sales Div. Tel.: +81-6-6373-4338 Fax: +81-6-6373-7297 E-mail: marine.aircon@daikin.co.jp

Liaison Office

 Daikin Europe nv - Brussels office
 'The Bridge' -Coca Cola Building Steenweg op Bergen 1424-Chaussée de Mons, 1070 Brussels, Belgium Tel.: +32-2-529-61-85 Fax: +32-2-529-61-99



Marine Type Packaged Air Conditioner for GALLEY

Marine Type Packaged Air Conditioner

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Outline of Company

Fuji Trading Co., Ltd. was established as a marine supplier in 1953 in Kobe, Japan. Over 55 years since then, the company has expanded and diversified into a supplier of technology, offshore drilling equipment and machinery as well as a developer of new markets and business opportunities.

Our job is to make procurement, transportation, and customs clearance of the required goods for our customers who travel around a unique market of "Marine" on a global scale by ship. We supply their requirements safely and accurately at main ports in the world within a limited time.

Through the above business, we contribute to the world trade by supporting smooth and economical ship's operation. In order to execute our task, we give the highest priority to the partnership with our customers, business acquaintances and makers. We are now upgrading and integrating our three functions, that is; information, procurement and physical distribution.

We have been rendering quality services of ship's stores, provisions, machinery, spare parts, engineering and so on. With the international network through the main depots and offices at Kobe, Yokohama, Tokyo, Rotterdam, London, Dubai, Singapore, Hong Kong, Shanghai, Pusan, and Baltimore, we are ready to provide the professional services at any time and place.

URL: http://www.fujitrading.co.jp/

TAKASHINA LIFE PRESERVERS CO., LTD.

Takashina Life Preservers Co., Ltd. was established in 1935 in Osaka, Japan. We manufacture products to protect our water environment & safety of those who work or recreate on water. Key products include life jackets, life buoys, immersion suits, dry suits, foul weather gear, and other marine accessories. It is our goal to satisfy our customers with a blend of quality, performance, and cost.

URL: http://www.jsmea.or.jp/kaiin/takashina/

Offices in Japan

- Kobe Office Tel: +81-78-413-2601 Fax: +81-78-413-1386 e-mail: mhq@fujitrading.co.jp
- Yokohama Office Tel: +81-45-622-5661 Fax: +81-45-629-1007 e-mail: supplyyh@fujitrading.co.jp
- Tokyo Office Tel: +81-3-5783-7390 Fax: +81-3-3450-7100 e-mail: tokyo@fujitrading.co.jp

Group Companies in Japan

- Fuji Transport Systems Co., Ltd. Tel: +81-78-411-2633 Fax: +81-78-411-3178 e-mail: ftr@fujitransport.co.jp
- Yokohama Tsusho Co., Ltd. Tel: +81-45-621-8588 Fax: +81-45-621-8662 e-mail: info@yokotsu.co.jp

Overseas Group Companies

• Europe

Fuji Ťrading (Marine) B.V., Rotterdam Tel: +31-10-429-8833 Fax: +31-10-429-5227 e-mail: info@fujitrading.nl Fuji Trading London Office Tel: +44-20-7236-0507 Fax: +44-20-7236-0521 e-mail: mail@fujitrading.co.uk

Middle East

Middle East-Fuji (L.L.C.) Tel: +971-4-347-4444 Fax: +971-4-347-2771 e-mail: info@mef.ae

Asia

Fuji Trading (Singapore) Pte. Ltd. Tel: +65-6264-1755 Fax: +65-6265-0443 e-mail: info@fujifts.com Fuji Trading (Marine) Co., Ltd., Hong Kong Tel: +852-2529-9177 Fax: +852-2865-6175 e-mail: info@fujitradinghk.com Hanil-Fuji (Korea) Co., Ltd. Tel: +82-51-712-8300, 8400 Fax: +82-51-631-7735 e-mail: shipstore@hanilss.com / spare@hanilss.com Fuji Trading (Shanghai) Co., Ltd. Tel: +86-21-6853-8813 Fax: +86-21-5821-1257 e-mail: ftzstores@fujitrading.net / ftzrepair@fujitrading.net • U.S.A. Fuji Trading (America) Inc.

Tel: +1-410-238-7985 Fax: +1-410-238-7989 e-mail: sales@fujitrading.us

Exhibits

- 1. Information related soft and hardware
- 2. Procurement related soft and hardware
- 3. Distribution related soft and hardware

With the above three main themes, we have exhibited what Fuji can provide for our customers now.

- Global Technical Network Service
- "FINe (Fuji Information Net) system 24-hour information service of your spare parts status
- IMPA Marine Stores Guide
- Immersion Suit, Fire Fighting Suit, Life Jacket of Takashina Life Preservers make as safety package

HEISHIN PUMP WORKS CO., LTD.

HEISHIN PUMP WORKS CO., LTD.

Outline of Company

Heishin Pump Works Co., Ltd., is the oldest Japanese manufacture of various kind of marine pumps, and Bilge Separator.

We have a firm policy that we should provide products which contribute to the protection of world ecology, for example the Bilge Separator.

Main Products

Centrifugal pump Gear pump Piston pump Screw pump 15ppm Bilge Separator (Oily Water Separator) ODM (Oil Discharge Monitoring Control System)

Head Office

1-5-30, Furuta, Harima-cho, Kako-gun, Hyogo Pref., 675-0146 Japan Tel : +81-79-436-3001 Fax : +81-79-436-3015 E-mail : kaigai@hsn-kikai.com

Exhibits

15ppm Bilge Separator / HFM type



Features

- Easy Maintenance / Easy Cleaning
- Easy Installation & Piping
- World Smallest size

Process

- First stage : Multi-parallel plate
- Second stage : Emulsion breaker
- Third stage : Coalescer
- Fourth stage : Fine coalescer

Approved by

- JG/MED/USCG

HISAKA WORKS, LTD.

HISAKA WORKS, LTD.

HISAKA WORKS, LTD., as the Japanese leading company of "Plate Heat Exchanger" launched its first product in 1953, is supplying continuously for marine application since 1966.

HISAKA WORKS, LTD. has been the top and leading supplier of "Plate Heat Exchanger", and kept supplying most suitable models and services for



various types of marine vessels such as Handy size, Handymax, Afaramax, Suezmax, Panamax, capesize, Post-panamax (from smallest to largest size) and for container vessels, VLCC, ULCC, Bulk carriers, LNG carriers, LPG carriers, Oil tankers, Chemical tankers, RORO ships (including PCC, PCTC) and Cruise ships & etc. (from dry cargo ships to luxury ships)

Today, well recognized of our high reliability and good reputations as well as superior performance of products enhanced by our services, it is raising and taking the market consciousness toward our products all around the world.

The latest topic about HISAKA is that the renovation of construction new and world latest facilities has been completed, and started its full-scale production since April 2008.

Including the cutting-edge new full automation 20,000ton press line, with existing 40,000-ton, 20,000-ton and high speed 4,000-ton press, HISAKA enhances its production system by total four press lines and meets the growing global market demands.

HISAKA, a certified company by ISO9001-2000 and ISO14001, fully complies with all type of ship classification societies for manufacturing its Plate Heat Exchangers.

Main Product (for Marine)

- Plate Heat Exchanger
- Accessories for Plate Heat Exchangers for marine application
- Maintenance service for Plate Heat Exchanger

Head office

4-2-14, Fushimimachi, Chuo-ku, Osaka, Japan Tel: +81-6-6201-3531 Fax: +81-6-6223-1419

Contact for Plate Heat Exchanger

Heat Exchanger Div. PHE Sales Dep't. Tel: +81-72-966-9601 Fax: +81-72-966-8923 E-mail: heatexc@hisaka.co.jp

Global contacts

- HISAKAWORKS S.E.A. SDN BHD, Malaysia Tel: +60-3-5621-8588 Fax: +60-3-5621-7588 E-mail: heatexc@hisaka-asia.com
- HISAKA (SHANGHAI) COMMERCE CO., LTD., China Tel: +86-21-5211-0701 Fax: +86-21-5211-0720 E-mail: hisaka-sha@hisaka.co.jp
- HISAKA WORKS (THAILAND) CO.,LTD.Thailand Tel: +66-2704-6038 Fax:+66-2704-6037 E-mail: heatexc@hisaka-thai.com
- Licence Production by ARSOPI THERMAL,Portugal Tel: +351-256-410410 Fax: +351-256-410411 E-mail: arsopi@arsopi-thermal.pt



Kawasaki KAWASAKI HEAVY INDUSTRIES, LTD.

KAWASAKI HEAVY INDUSTRIES, LTD.

Since its establishment in 1878, Kawasaki Heavy Industries, Ltd. has dedicated itself to innovative technological development and has been active in business worldwide.

It has expanded from its origin in shipbuilding to rolling stock, aircraft, machinery, plants and equipment, bridges, motorcycles and more.

Now Kawasaki is engaged in areas such as transportation, the development of energy and of space and environmental protection; projects crucial to the lives and livelihoods of future generations.

Kawasaki is aggressive in its pursuit of technological developments – we are building dreams by staying in front.

Main Products

- Diesel Engine, Main Steam turbine, Reduction Gear
- C.P. Propeller, Side thruster, Azimuth thruster & Integrated control system
- Main Boiler (Kawasaki Plant Systems, Ltd.)
- Steering gear, Deck machinery and Camera stabilizer on ships (Kawasaki Precision Machinery Ltd.)
- Shipbuilding & Repairing (Kawasaki Shipbuilding Corporation)

Head Office

World Trade Center Building, 4-1, Hamamatsu-cho 2-chome, Minato-ku, Tokyo 105-6116, Japan Tel: +81-3-3435-2374 Fax: +81-3-3435-2022 http://www.khi.co.jp/

Liaison Offices

- Kawasaki Heavy Industries (Europe) B.V. 7th Floor, Rivierstaete, Amsteldijk 166, 1079 LH Amsterdam, The Netherlands Tel: +31-20-644-6869 Fax: +31-20-642-5725
- Kawasaki Heavy Industries (UK) Ltd.
 4th Floor, 3 St. Helen's Place, London EC3A 6AB, United Kingdom
 Tel: +44-20-7588-5222 Fax: +44-20-7588-5333

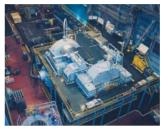
Affiliated Companies

- Kawasaki Plant Systems, Ltd. 11-1, Minamisuna, 2-chome, Koto-ku, Tokyo 136-8588, Japan Tel:+81-3-3615-6979 Fax:+81-3-3615-9663 http://www.khi.co.jp/kplant
- Kawasaki Precision Machinery Ltd.
 234 Matsumoto, Hasetani-cho, Nishi-ku, Kobe 651-2239, Japan Tel: +81-78-991-1133 Fax: +81-78-991-3186 http://www.khi.co.jp/kpm/

Kawasaki Shipbuilding Corporation

1-1, Higashikawasaki-cho 3-chome, Chuo-ku, Kobe 650-8670, Japan Tel: +81-78-682-5501 Fax: +81-78-682-5514 http://www.kawasakizosen.co.jp

- Main Steam Turbine
- Main Boiler





Reduction Gear



Azimuth thruster



Steering Gear





Side Thruster



Kawasaki Precision Machinery Ltd.

Kawasaki Precision Machinery Ltd.

Outline of company

More than eighty years has passed since Kawasaki Precision Machinery Ltd., began the manufacture of electro-hydraulic steering gears in 1924. During this period our products have gained high reputation among shipbuilders not only in Japan but also in many countries of the world, and we have supplied more than 16,000 units of steering gear.

Subsequently, we also advanced into the manufacturing of hydraulic deck machinery. Highpressure, compact, quiet, and with superior speed control, this machinery has earned an excellent reputation. It has been used in over 5,500 ships - LNG carriers, container ships, VLCCs, ferries, and more. In this field, too, we are the world leader.

Main products

- Steering gear
- Deck machinery
- Hydraulic equipment (hydraulic motor, pump, valve)

Head office/Main Plant

234, Matsumoto, Hasetani-cho, Nishi-ku, Kobe 651-2239, Japan Tel: +81-78-991-1133 Fax:+81-78-991-3186 URL:http://www.khi.co.jp/kpm

Tokyo office

World Trade Center Bldg., 4-1, Hamamatsu-cho 2-chome, Minato-ku, Tokyo 105-6116, Japan Tel:+81-3-3435-6881 Fax:+81-3-3435-2023

Kobe office

Kobe Crystal Tower, 1-3 Higashikawasaki-cho 1-chome, Chuo-ku, Kobe 650-8680, Japan Tel:+81-78-360-8608 Fax:+81-78-360-8609

Overseas office

- Kawasaki Precision Machinery (UK) Ltd.
 Ernesettle Lane, Ernesettle, Plymouth, Devon PL5 2SA, United Kingdom
 Tel:+44-1752-364394 Fax:+44-1752-364816
 URL:http://www.kpm-eu.com
- Flutek, Ltd. (Marine Machinery Factory) 79-2, Bongsu-myeon samgari, Uiryeoung, Kyungnam, 641-370 Republic of Korea Tel:+82-55-574-5744 Fax:+82-55-574-5714 URL:http://www.flutek.co.kr





NABCO Ltd. and TS Corporation had been integrated in Nabtesco Corporation in October 2004 aimed at being the world's leading manufacture of motion control systems for Air, Land and Marine field applications by combining the strength of both Group's technology.

NABTESCO Corporation has played a leading role in the total control system in marine field, especially M-800 series main engine remote control system and MG-800 digital governor system has enjoyed a good reputation among customers the world over.

Main Products

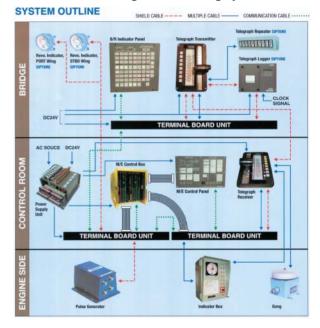
- Main Engine (diesel or turbine) remote control system
- CPP, Side thruster, Steerable thruster and Water-jet remote control system
- Digital governor system
- Engine telegraph system and Telegraph logger, Revolution indicating system
- Main engine monitoring system
- Adsorption type air dryer unit for marine

Head Office

Kokusai Hamamatsucho Building, 9-18, Kaigan 1-chome, Minato-ku, Tokyo 105-0022, Japan Tel: +81-3-5470-2413 Fax: +81-3-5470-2417 E-mail: marine-overseas@nabtesco.com

Legitimate Companies

- NABMIC B.V.
 - Tel: +31-180-530-590 Fax: +31-180-530-591
- NABTESCO Marine Service Singapore Pte. Ltd. Tel: +65-6225-6559 Fax: +65-6225-7393
- NABTESCO Marinetec Co., Ltd. Tel: +82-51-464-9380 Fax: +82-51-464-8250
- NABTESCO Marine Control Systems (Shanghai) Co., Ltd. Tel: +86-21-5852-0363 Fax: +86-21-5852-0348



M-800-III Series Bridge Maneuvering system

Features

- Highly visible and functional arrangement of indicator lamps and switches for easy and accurate operation
- Flexible pattern of indicator and alarm by microcomputer
- Data communication with easy expansion by LAN based on CAN
- Output signal for Voyage Data Recorder as standard
- Shorten wiring time by flat cables
- Less wiring due to serial communication
 Even one line has a trouble, communication is possible by using remained two lines

Panel Exhibits

Introduction of following items:

- M-800-III Series Bridge Maneuvering System & MG-800
 Digital Governor System
- Worldwide network services



NAKASHIMA PROPELLER CO., LTD.

Outline of company

Nakashima Propeller is the leading company of marine propulsion specialists in the world. Since founded in 1926, we have continuously been advancing to be the world's only comprehensive designers/manufacturers of marine propulsion equipment applicable to a wide range from smaller-sized pleasure boats and fishing boats up to large-sized merchant vessels including ULCC, mega container vessels, and LNG carriers, by utilizing experiences acculated.

Main Products

- Fixed Pitch Propeller
- Controllable Pitch Propeller
- Side Thruster
- Shafting Equipment

Head Office

688-1, Joto-Kitagata, Okayama 709-0625, Japan Tel: +81-86-279-5111 Fax: +81-86-279-3107 URL: http://www.nakashima.co.jp/en E-mail: npcwebmaster@nakashima.co.jp



Controllable Pitch Propeller



Side Thruster

Exhibits & Features

1. Fixed Pitch Propeller (F.P.P.) & Controllable Pitch Propeller (C.P.P.)

Nakashima Propeller's F.P.P. & C.P.P. with a variety of sizes/models available for a wide range of the applications.

2. Side Thruster

Nakashima Propeller's side thrusters to facilitate the vessels's operation sideways effectively and efficiently near a quay or a dockyard.



NANIWA PUMP MFG. CO., LTD.

NANIWA PUMP MFG. CO., LTD.

Outline of Company NANIWA PROVIDES WORLD CLASS RELIABILITY AND PERFORMANCE

Naniwa Pump Mfg. Co., Ltd., is a leading Japanese manufacturer of a wide variety of marine and industrial pumps.

Naniwa brand is known Worldwide for its superior quality and performance for all types of Marine Engine Room and Cargo Pumps.

Both the quality and design of Naniwa Pumps meet or exceed the global requirements of classification societies and national standards.

Naniwa Pump is capable of expediting all customers' needs.

Main Products

Pumps and Steam Turbines of all types and related systems and equipment for marine applications:

- (1) Engine room pumps:
 - Centrifugal pumps Piston pumps
 - Rotary gear pumps
- Hydrophore tank unit
- Rotary screw pumps
 Central priming unit
- (2) Pump room pump package:
 - · Cargo pumps: Centrifugal type or two-rotor screw type
 - Water ballast pumps: Centrifugal type
 - Stripping pumps: Steam driven reciprocating type or two-rotor screw type
 - Automatic priming, capacity regulating and stripping systems

Head Office

11-5, Shinmachi 3-chome, Nishi-ku, Osaka 550-0013, Japan Tel: +81-6-6541-6231 Fax: +81-6-6541-7492 E-mail: kaigai@naniwa-pump.co.jp Website: www.naniwa-pump.co.jp

Exhibits

Centrifugal Pump model FEWV-400D



Feature

Centrifugal Pump model FEWV-400D

Item		
Pump type		Vertical single stage, double suction
		Centrifugal Pump
Application		Main Cool. S.W. Pump
		Ballast Pump, etc.
Bore	mm	400/400 (Suc./Dis.)
Capacity	m³/h	1,100 ~ 1,500
T. Head	m	20 ~ 30
Speed	rpm	1450/1750
Weight	kg	650

Liaison office and/or agent

Europe Representative Office Hemmingstedter Weg 111a D-22609 Hamburg, Germany Tel.: +49-40-890-5779 Fax: +49-40-890-5785 E-mail: naniwa@sinz.org

MGATA NIGATA POWER SYSTEMS CO., LTD.

Outline of Company

NIIGATA POWER SYSTEMS CO., LTD. is the successor of NIIGATA ENGINEERING CO., LTD. for its power systems business since Feb. 3, 2003 and started as a member of ISHIKAWAJIMA-HARIMA HEAVY INDUSTRIES CO., LTD. ("IHI") group.

"NIIGATA DIESEL" brand was established in 1919 and delivered more than 30,000 units.

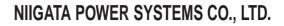
For their products, NIIGATA always pays special attention to solving environmental issues and increasing economical advantages.

In the marine business field, NIIGATA is well known as the Japanese advanced prime mover manufacture. NIIGATA also has delivered 2,500 units of 360 deg. steerable propellers named "NIIGATA Z-peller" which have been installed on about 1,100 harbor tugboats as well as a number of various vessels.

Main Products (Marine propulsion-related)

- (1) Diesel Engines
- (2) Z-pellers
- (3) Couplings and dampers
- (4) Remote control and monitoring systems







Head Office

Ishiko Bldg., 9-7, Yaesu 2-chome, Chuo-ku, Tokyo 104-0028 Japan Tel: +81-3-6214-2812 Fax: +81-3-6214-2819

URL: http://www.niigata-power.com/

Exhibits

(1) Operatable scale model of NIIGATA DIESEL-coupled Z-pellar.

(2) Scale model of tugboat equipped with twin Z-pellar.

Features

- **Z-pellers:** Big advantage features excellent bollard pull and maneuverability, and easy maintenance with robust structure under a single responsibility throughout shafting with NIIGATA DIESEL.

Liaison Office

NIIGATA POWER SYSTEMS (EUROPE) B.V. Beursplein 37, 3011 AA Rotterdam, The Netherlands Tel: +31-10-405-3085 Fax: +31-10-405-5067

NISHISHIBA ELECTRIC CO., LTD.

NISHISHIBA, as a member of the Toshiba Group, has been pursuing the advancement of the control and efficient use of energy.

For the last half-century, with the combined force of power and electronics, we have been contributing to society in various ways.

We have made electric power generating system, electric systems for marine and offshore use, control systems, and industrial electric equipment systems.

Main Products

- All kind of Generators and Motors
- All kind of Switchboards and Ventilation Fans
- Inverter control systems for Crane, Winch/Windlass, Aux. pump
- Shaft driven Generating Systems
- Electric Propulsion Systems

Head office & Factory

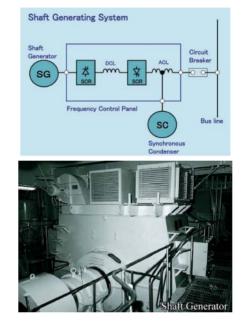
1000 Hamada, Aboshi-Ku, Himeji 671-1280, Japan Tel: +81-79-271-2448 Fax: +81-79-271-2411 URL:http://www.nishishiba.co.jp

Kansai branch

Shin-Osaka lida Building, 5-33, Nishimiyahara 1-chome, Yodogawa-Ku, Osaka 532-0004, Japan Tel: +81-6-6397-3461 Fax: +81-6-6397-3475

Exhibits

(1) Shaft driven Generating Systems



- (2) Generators, Motors, Inverter control systems Features
- (1) Shaft driven Generating Systems
- Energy Saving
- Less Maintenance
- Operation-support System with Fault Diagnosis
- Motoring mode
- Direct connection to 6.6kV main bus without step-up transformer
- Emergency Power Take Off (Option)

Liaison office and/or agent

BARTHELS + LUDERS GMBH Norderelbstrabe 15, D-20457 Hamburg, Germany Tel: +49-40-3119-8150 Fax: +49-40-3119-8111



SASAKURA ENGINEERING CO., LTD.

Since 1949, we have devoted ourselves to development of the advanced technologies in the field of Desalination, Heat Transfer, Waste Water Treatment, Pollution Control, Noise Control, that have largely contributed to great progress of various industries and human life.

Now with the best of our abilities, we are challenging to materialize more sophisticated technologies for harmonious progress of the human beings and the nature.

Main Products

- Fresh Water Generator (Tubular / Plate / RO)
- Bilge Separator
- Sewage Treatment Plant
- Deaerator
- Deoiler
- Cryogenic Butterfly Valve
- Tubular Heat Exchanger
- Noise Control System

Head Office

7-32, Takejima 4-chome, Nishiyodogawa-ku, Osaka 555-0011, Japan. Machinery Division Tel: +81-6-6473-2134 Fax: +81-6-6473-5540 E-mail : marine@skm.sasakura.co.jp URL : http://www.sasakura.co.jp

SASAKURA ENGINEERING CO., LTD.

Exhibits

K siries Fresh Water Generator

Features

- High Purity Distillate
- Simple Operation
- Scale-free Performance
- High reliability



MODEL : KE 20 (Capacity : 20tons/day)

Other Products

- Plate Type Fresh Water Generator
- Multi-Effect Submerged Tube Type Fresh Water Generator
- Two-Stage Flash-Type Distilling Plant (F-DP)
- Low-Pressure Submerged Tube-Type Distilling Plant (V-DP)
- Bilge Separator
- Cryogenic Butterfly Valve for LNG Carrier





Outline of Company

Sunflame's core technology is "Combustion with Rotary Cup Burner & its Control System"

We were born as a burner service company in 1968. Ever since we have listened to the users of the burner plants and reflected their requests/suggestions for improvement. We are devoting to the marine business and working for the world markets, certified by NK for ISO 9001, with our Rotary cup burner for aux. boiler and the incinerator with rotary cup burner.

Main Products;

- Rotary cup burner for aux. boiler, from the small dry cargo ship use to VLCC use large tanker boiler (below 1 tons/h boiler to 55 tons/h boiler capacity)
- Incinerator, IMO type approved for 190KW to 1500KW.

Head Office;

1-30, Nishinohata, Okubocho, Uji, Kyoto 611-0033, JAPAN Tel : +81-774-41-3310 Fax : +81-774-41-3311 E-mail : info@sunflame.net http://www.sunflame.net

Agent in Germany

Wilhelm Rump KG (GmbH & Co.) Buchheisterstrasse 6, 20457 Hamburg - Germany Tel : +49-40-31-78-42-0, Fax : +49-40-319-48-41 E-mail : h.rump@rump-kg.de http://www.rump-kg.de

Exhibit

New burner SDR-1500

New control system for new boiler or retrofitting to existing Sunflame rotary cup burners.

Features

- Advanced rotary cup burner has no more belt for conveying rotation, but directly connected cup rotation motor with cup shaft. For tanker boiler use, we have extended this idea with inverter for cup rotation control and obtain turn-down of 1:10. On top of it, we can still enjoy limited excess air ratio in combustion by rotary cup burner, vessel can save fuel consumption.
- New control system can offer user-friendly use by even a less experienced crew onboard, by adopting the followings;
- 1. Graphical control and monitor at local & remote control with touch sensor panels.
- 2. Two control systems in a panel, PLC and hard-wired relay system. Hence even if PLC is broken, crew can still use hard-wired relay system in auto mode except a few actions for full manual operation.
- 3. LED lamp indication at each relay for sending signals, can contribute easy report by crew what is wrong in the signal relay system.
- 4. Reset function to initial setting by supplier's expert engineer.
- 5. Operation manual stored in monitor panel.
- 6. Logging function (Running status / alarm, etc.)
- Incinerator with rotary cup burner
- Good atomization with rotary cup burner contributes not needing help from diesel oil combustion when burning waste oil, hence in our system we cannot burn DO while burning sludge. Running cost can be much saved.







TAIKO KIKAI INDUSTRIES CO., LTD.

Outline of company

TAIKO, as a general manufacture of pumps and environment equipments, has produced various kinds of marine pumps, bilge separator, sewage treatment device and the cargo pump system for tankers. We continue to contribute the modernization of marine industry under motto of "Clean the sea and friendly to the earth".

Maine products

Gear pump Screw pump Centrifugal pump Sewage Treatment Device Oily Water Separator Piston pump Rotary blower Vacuum pump

Head office

Oversea Business Sect. 209-1 Shimotabuse, Tabuse-cho, Kumage-gun, Yamaguchi 742-1598, JAPAN Tel: 81-820-52-3113 Fax: 81-820-53-1001 E-mail: business@taiko-kk.com

Korea

41-30 Gupyung-dong Sha-gu, Busan Korea Tel: 82-51-261-9895 Fax: 82-51-261-9897 E-mail: taikokim@hanmail.net

🕨 China

28 F/F, Times Square, No 500 Zhangyang rd, Shanghai 200122, China Tel: 86-21-5836-8070 Fax: 86-21-5836-8077 E-mail: shanghai@taiko-kk.com

Exhibits

-Bilge separator (Demonstration of separating bilge)

Features

Bilge separator

- A high performance coalescer capable of treating emulsions is incorporated. Significantly improved service life (more than 1.5times in our c o m p a n y ' s comparison).
- A cylindrical package type with an installation area as small as the space-saving types of conventional separators.
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- Stainless steel (SUS304) is used not only for corrosive portions of nozzle but also for parts around coalescer which constitute an essential part of the separator.

Agent in Europe

- FUJI TRADING (MARINE) B.V. POST BOX 2498, 3000 CL Rotterdam, Sluysjesdijk 109, 3087 AE Rotterdam, THE NETHER LANDS Tel: 010-429 88 33 Fax: 010-429 52 27
- NIPPON DIESEL SERVICE GMBH Hermann-Blohm-Str. 1 D-20457 Hamburg GERMANY Tel: +49-40317710 Fax: +49-40311598
- UNIVERSAL MARINE SUPPLIES LTD. 10 Skouze & Filonos Str. Piraeus GREECE Tel: +30-2104287740 Fax: +30-2104287744

TAIXO ELECTRIC GROUP

TAIYO ELECTRIC GROUP

COMPREHENSIVE SUPPLIER OF ELECTRIC EQUIPMENT & MACHINERY FOR MARINE USE

Taiyo Electric Group, Taiyo Electric Co.,Ltd and Sanshin Electric Corporation, have accumulated sales records since its founding nearly a century ago. Today, we deliver highly reliable electrical equipment for wide variety of vessels all over the world.



Vessels equipped with our products range from small fishing boats and coastal ships to large vessels, including containerships, cruise ships, bulk carriers, VLCCs and LNGCs.

When developing new products, Taiyo group bears in mind the specific requirements of each individual vessel as well as the needs of the times, while pursuing the highest possible quality and technical standards. As a leading manufacturer of marine electrical equipment, we produce and market a diversity of system-based products, including thyristor type shaft generator systems and inverter control devices, in addition to general electrical machinery and equipment such as generators, motors, ventilators, switchboards, starters, main engine monitoring boards, searchlights and lighting fixtures.

Based upon our valuable experience and wealthy knowledge with the unique solution as "total supplier", Taiyo Electric Group has a favorable reception from shipyards & ship owners of various countries in the world.

Main Products of Taiyo Electric Co., Ltd.

- Generators
 Induction Motors
 Ventilation Fans
- Switchboards & Starters
 Alarm Monitoring System
- Inverter Speed Control Systems
- Thyristor Control Shaft Generating System
- Diesel Electric Propulsion System



Anti-Piracy Search Light

- New development for the anti-piracy purpose
- Effective to keep guard in the night and give bedazzlement to suspect vessels by powerful beam of over 1,000,000cd.
- Xenon lamp or Metal halide lamp 150W
- Suitable for the on deck use "Water Proof IP56"



RBX-16VB

 Various type of installation and operation "Fixed mounting" "Temporary clamp mounting" and "Hand held operation".

Easy operation to connect the plug to the socket-outlet of power source because the ballast is combined with search light. Available to light up around the ship by temporary clamp installation to balustrade on deck. Possible to use as portable search light by connection of

the optional extension cable.

Different size of installation clamp is available on request.

Main Products of Sanshin Electric Corporation

- Revolving Machines
- SearchlightsLighting Fixtures
- Legal Marine ApparatusWiring Fittings
- Marine Parts
- Signal and Alarm Equipments
- Security and Guard Apparatus
- Marine Equipments and Fish Collecting Light

Head Office

Sanritsusha Bldg., 16-8, 1-chome, Uchikanda, Chiyoda-ku, Tokyo 101-0047 Japan [Taiyo Electric Co., Ltd.] Tel : +81-3-3293-3067 Fax : +81-3-3292-7012 URL : http://www.taiyo-electric.co.jp [Sanshin Electric Corporation] Tel : +81-3-3295-1831 Fax : +81-3-5259-8043 URL : http://www.sanshin-electric.co.jp

Liaison Office and/or Agent

Wilhelm Rump KG GmbH & Co. Buchheisterstrabe 6 20457 Hamburg Dr Kay Rump Tel : +40 3 17 84 20 Fax : +40 3 19 48 41

TANABE PNEUMATIC MACHINERY CO., LTD.

TANABE PNEUMATIC MACHINERY CO., LTD.

Found in 1921 by Shozo Tanabe, Tanabe Pneumatic Machinery Company has many years experience in manufacturing compressors. Along with specializing in marine compressor packages Tanabe also design and build high pressure units used in industries such as steel. PET moulding and CNG Stations.

With years of experience and a high quality product range Tanabe have remained as one of the leading suppliers of marine air compressor with a market share of over 70% within the Japanese marine market.

Main Products (Marine use)

Marine compressors (starting/control/service/emergency air compressors, piston and screw type available)

Head Office

14-6, Senrioka 2-chome, Settsu, Osaka 566-0001, Japan Tel: +81-6-6388-1337 Fax: +81-6-6380-8560 URL: http://www.tanacomp.co.jp e-mail: info@tanacomp.co.jp

Sole Agent for Export

Tanabe Compressor Co., Ltd. 15-24, Naganohigashi, Suita, Osaka 565-0816, Japan Tel: +81-6-6878-4446 Fax: +81-6-6875-2620 e-mail: info@tanabe-intl.com

Singapore Office

Tanabe Compressors Pte. Ltd. 2 Jurong East Street 21, IMM Building #04-30, Singapore 609601 +65-6562-6800 Tel: Fax: +65-6562-6811 e-mail: sales@tancomp.com.sg



Starting compressor H-374

Advantages

Advanced engineering feature insure highest efficiency and endurance.

Balanced simple design conforms to all maritime compressed air requirement.

Certified by all registers a Shipping Classifications (LR. DNV. ABS. BV. GL. NK. and others) through long experience in Production.

Dual profit by low maintenance cost together with reliable performance.

TSUJI HEAVY INDUSTRIES CO., LTD.

TSUJI HEAVY INDUSTRIES CO., LTD.

Outline of Company

TSUJI HEAVY INDUSTRIES, founded in 1939, is the leading manufacturer of marine cargo handling equipment such as onboard deck cranes and hatch covers, which combine reliability and efficiency with economic pricing.

The company operates three large factories - one Japan and two in China.

At the Chinese facilities, in addition to the manufacturing of cranes and hatch covers, the company is building complete bulk carriers up to 100,000dwt.

Main Products

All types of Deck Crane, Hatch Cover, Gantry Crane, Unloader System, Ro-Ro System.

Head Office

177-2, Hikari-machi, Sasebo, Nagasaki 858-8501, Japan Tel: +81-956-47-3113 Fax: +81-956-47-5700 E-mail: main.office@tsuji-hi.com URL: www.tsuji-hi.com

Exhibits

30,000dwt "Trader" handysize bulk carrier

Features

Double hull, latest IACS-CSR/IMO regulations.



YANMAR CO., LTD.



Outline of Company

Yanmar, ever since its foundation, has been developing versatile energy and labor-saving diesel engines with output ranging from 2kW to 3,500kW through its unique diesel technologies, contributing to the community through energy conservation.

Our ceaseless efforts to produce ever higher quality products were rewarded with ISO9001 certification by Lloyds (LRQA) of Britain for the Amagasaki Plant of the Large Power Products Operations Division in July 1992, confirming international recognition for the excellent quality assurance system of the plant. The Large Power Products Operations Division of Yanmar has been a pioneer in tackling environmental problems and in June, 1997, the Amagasaki Plant became the first large industrial and marine diesel engine plant in Japan to be certified under ISO14001. The marine diesel engines produced by the Amagasaki Plant were also the first in Japan to clear the emission (NOx) control regulations of the IMO. The far-sighted efforts and excellent technologies of the Large Power Products Operations Division protect our environment and are highly evaluated in the world.

The Amagasaki Plant of Yanmar aims to ensure beautiful harmony with the global environment and to contribute widely throughout industry and society to create a better future for all.

Head Office

1-1,Yaesu 2-chome, Chuo-ku, Tokyo 104-0028, Japan. Tel: +81-3-3275-4909 Fax: +81-3-3275-4969 http://www.yanmar.co.jp

Overseas Subsidiary

Yanmar Europe B.V. Brugplein 11,1332 BS Almere-de Vaart, The Netherlands Tel: +31-36-5493200 Fax: +31-36-5493209 http://www.yanmar.nl

Main Products

Marine propulsion and auxiliary diesel engines

Exhibits

Marine auxiliary diesel engine, Model 6EY18 (A) L Cut Model and Marine diesel engine, Model 6AY



Features 6EY18 (A) L:

- The low sac type fuel valves, variable jacket water temperature control and valve stem seal with backpressure lip, are technologies included to reduce soiling of the combustion chamber which occurs with the use of low-grade heavy oil.
- With the introduction of a new "stay clean" design turbocharger maintenance intervals will be lengthened while the automatic back washing LO filter allows for maintenance-free operation.
- 3. Compact design allows simplicity in the engine room layout.
- 4. With concentration of the pipe connections at the front of the engine, piping construction man-hours are reduced.
- 5. The intercooler and stand of turbocharger have been designed as a single compact unit. The number of parts has been reduced by 30%, further increasing ease of maintenance.
- 6. High probability of corresponding to future environmental regulations.



RIKEN CORPORATION has been contributing to the shipbuilding industries throughout the world for over 70 years as a leading supplier of internal combustion engine components, including piston rings.

In particular, our piston rings for marine use internal combustion engines, boasting high quality and performance, have been held in high repute among worldwide users in the trade. Our piston rings are based on our special, proven material technologies, including a variety of materials of special cast iron and wellestablished material processing technologies acquired through our long experience, as well as state-of-the-art surface treatment technologies developed using our continuing R&D efforts.

Head Office

13-5, Kudankita 1-chome, Chiyoda-ku, Tokyo 102-8202, Japan Tel: +81-3-3230-3911 Fax: +81-3-3230-3919 URL: http://www.riken.co.jp

Sales Office

 Overseas Sales & Marketing Div. Section #1

 Tel: +81-3-3230-3926

 Tokyo Sales Div. Section #4

 Osaka Sales Div. Section #2

 Tel: +81-6-4706-6740

 Fukuoka Sales Office



Piston Rings For Marine and Industrial Diesel Engines

Head Office Japan Marine Equipment Association

6th Floor, Kaiyo Senpaku Building, 15-16, Toranomon 1-chome, Minato-ku, Tokyo 105-0001, Japan Tel: +81-3-3502-2041 Fax: +81-3-3591-2206 E-mail: info@jsmea.or.jp URL: http://www.jsmea.or.jp

Overseas Offices

• Shanghai

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London

Japan Ship Centre (JETRO), Ship Machinery Department 2nd Floor, 6 Lloyd's Avenue, London EC3N 3AX UK Tel: +44-20-7680-9456 Fax: +44-20-7680-9416 E-mail: info@jsc.org.uk

URL: http://www.jsc.org.uk

Singapore

JETRO Singapore, Ship Machinery Division Hong Leong Building, #38-01 to 05 #37-02A 16 Raffles Quay, SINGAPORE 048581 **Tel:** +65-6429-9522 **Fax:** +65-6224-1169