



Jsmea News



JSMEA
Japan Ship Machinery and Equipment Association

JSMEA partakes in Sea Japan 2022

The Japan Ship Machinery and Equipment Association (JSMEA), with support by The Nippon Foundation, partook in Sea Japan 2022 on April 20-22 at Tokyo Big Sight. At the event, held for the first time in four years, JSMEA coordinated the Japan Pavilion with exhibitions and events in partnership with a Sea Japan 2022 Maritime Cluster Planning Committee, which consisted of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and other relevant maritime affairs organizations.

In the Theme Zone of the Japan Pavilion, 52 companies and organizations from the Japanese maritime industry introduced its latest technologies, products and so forth. Under the main theme: "Earth- and Ocean-Friendly Technologies—Towards a Sustainable GX/DX Society," the Theme Zone was divided into smaller areas, where exhibitions focused on "Naval Vessel," "Marine Transportation," "Shipbuilding," "Coastal Ship/Ferry," "Zero Emission," "Offshore/Offshore Wind," "DX/Autonomous Shipping" and other subjects.

In the members' zone, meanwhile, 64 JSMEA members oversaw their booths. Here also, JSMEA unveiled its blueprint for all future Japan pavilions, an image branding design to be used consistently at international exhibitions across the globe. The design was highly rated by both exhibitors and visitors, with one commenting, "The modern Japanese design makes us feel something new of the new Japan Pavilion."

Many exhibitors from the zones voiced their delight. "As we are still in the midst of the coronavirus pandemic, we felt unsure about how the exhibition—held for the first time in four years—would go over," one exhibitor said. "But once it started, we saw that there were as many visitors as last time, giving us a good feeling."

JSMEA also hosted a ship machinery and equipment industry event for

students from the universities and colleges for which it had convened job fairs and other relevant gatherings. It was attended by 54 students and instructors from eight institutions. Besides presentations by industry stakeholders, a stamp rally was given for the first time to encourage attendees to visit as many booths as they could. Consequently, many students challenged to visit many exhibitors. "It was a great opportunity to feel the attractiveness of the ship machinery and equipment industry," one student said.

On the final day, JSMEA was joined by the MLIT and Nippon Kaiji Kyokai (ClassNK) for a ships and marine technology seminar, entitled "Challenges in the Shipping, Shipbuilding and Marine Industries for a Decarbonized Society."



MLIT State Minister Watanabe Takeyuki gives the opening address.

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AKASAKA DIESELS LIMITED
ANEOS Corporation
EAGLE INDUSTRY CO.,LTD.
N.Y.Co.,Ltd.
SKK Corporation
TAKENAKA SEISAKUSHO CO., LTD.
TOBU JUKOGYO CO.,LTD.
TOKYO KEIKI INC.

JSMEA signs MoU with Danish Maritime 20

Opening ceremony at Sea Japan 2022



The ribbon is cut for the opening of Sea Japan 2022.

Many of the presentations were being given for the first time, and interest had attendance overbooked at pre-registration. Attendees had to bear standing in a long line before the start of the event, and it was safe to say that the seminar was highly successful, welcoming a total of as many as 473 participants in its morning and afternoon sessions. "It was a meaningful seminar, as it extensively covered the latest efforts of the maritime cluster, including the government, shipping companies, shipbuilders, a classification society and ship machinery and equipment makers," an attendee remarked.

On the same day, JSMEA joined hands with the Japan Coast Guard (JCG) to unveil the JCG's latest large survey vessel "Heiyo" to the public. Thanks to favorable weather conditions, as many as 438 people took part in the event, a much greater number than expected. They enjoyed an opportunity to board the vessel, which had been built from the best of Japan's technologies. On the previous day, students were invited on board. It was a great occasion to promote the JCG, which is not very well known to outsiders, as some of the students became interested in the roles the JCG plays.

About Sea Japan 2022

Time and Dates: 10:00-17:00, Wednesday-Friday, April 20-22, 2022

Venue: East halls 5 and 6, Tokyo Big Sight

Number of exhibitors: 342

Number of visitors: 17,444 (according to the organizer)

About the Japan Pavilion's Theme Zone (subsidized by The Nippon Foundation)

Details: To introduce the technological capabilities of the Japanese maritime cluster in Japan and overseas, comprehensive exhibitions were given in the following categories under the main theme: "Earth- and Ocean-Friendly Technologies—Towards a Sustainable GX/DX Society". Discussions had been held by the Sea Japan 2022 Maritime Cluster Planning Committee, consisting of the MLIT, relevant organizations, universities and colleges, shipping companies and others (leader: Matsumoto Tomohiro, head, Boat Affairs Office, Shipbuilding and Ship Machinery Division, Maritime Bureau, MLIT).

Main theme: Earth- and Ocean-Friendly Technologies—Towards a Sustainable GX/DX Society

Categories: 1) General Exhibition, 2) Naval Vessel, 3) Marine Transportation, 4) Shipbuilding, 5) Coastal Ship/Ferry, 6) Ship Classification, 7) Zero Emission,

8) Offshore/Offshore Wind, 9) DX/Autonomous Shipping and 10) Research Subject

Exhibition area: 798 square meters

Number of exhibitors: 52 companies and organizations

Exhibitors: Acquisition, Technology & Logistics Agency (ATLA); Akasaka Diesels Ltd.; Automize Lab. Co., Ltd.; BEMAC Corp.; Cooperative Association of Japan Shipbuilders (CAJS); Daihatsu Diesel Mfg. Co., Ltd.; Daikin MR Engineering, Ltd.; Ferry Sunflower Ltd.; Hankyu Ferry Co., Ltd.; The Hanshin Diesel Works, Ltd.; IHI Power Systems Co., Ltd.; INPEX Corp.; Japan Agency for Marine-Earth Science & Technology (JAMSTEC); Japan Coast Guard (JCG); Japan Marine United Corp. (JMU); Japan Railway Construction, Transport & Technology Agency (JRTT); Japan Ship Machinery and Equipment Association (JSMEA); Japan Ship Technology Research Association (JSTRA); JX Nippon Oil & Gas Exploration Corp.; Kamome Propeller Co., Ltd.; Kawasaki Heavy Industries, Ltd. (KHI); Kawasaki Kisen Kaisha, Ltd. ("K" Line); Manabe Zoki Co., Ltd.; Maritime Staff Office (MSO); Meimon Taiyo Ferry Co., Ltd.; Ministry of Land, Infrastructure, Transport and Tourism (MLIT); Mitsubishi Shipbuilding Co., Ltd.; Mitsui E&S Shipbuilding Co., Ltd.; Mitsui O.S.K. Lines, Ltd. (MOL); Miyazaki Car Ferry Co., Ltd.; MOL Ferry Co., Ltd.; Namura Shipbuilding Co., Ltd.; Nabtesco Corp.; National Institute of Marine, Port & Aviation Technology (MPAT); National Maritime Research Institute (NMRI); The Nippon Foundation; Nippon Kaiji Kyokai (ClassNK); Nippon Yusen Kaisha (NYK); NYK Trading Corp.; Planning & Design Center for Greener Ships (GSC); Shin Kurushima Sanoyas Shipbuilding Co., Ltd.; Shin Nihonkai Ferry Co., Ltd.; Shipbuilding Research Centre of Japan (SRC); The Shipbuilders' Association of Japan (SAJ); Taiheiyō Ferry Co., Ltd.; Tamaya Technics Inc.; Tokyo Kyushu Ferry Co., Ltd.; Trans Ocean Co., Ltd.; Univ. of Tokyo; Volcano Co., Ltd.; Yanmar Power Technology Co., Ltd.; and Yokohama National Univ.

About events (subsidized by The Nippon Foundation)

1) Ships and Marine Technology Seminar

Time and Date: 10:30-15:15, Friday, April 22, 2022

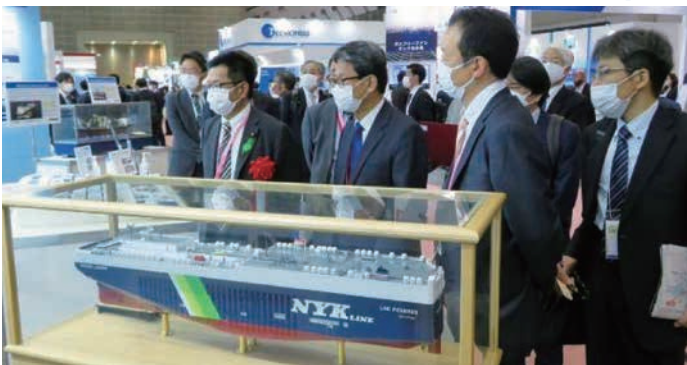
Venue: Special Seminar Room

Hosts: JSMEA, MLIT and ClassNK

Title: "Roadmap for Achieving 'Decarbonization'—Latest Information from Japan's Maritime Cluster (Government, Shipping, Shipbuilding, Marine, Ship Class)"

Number of attendees: 213 in the morning and 260 in the afternoon

MLIT State Minister Watanabe Visits Japan Pavilion



Japan Pavilion's Theme Zone



Schedule:

Morning session: 10:30-11:55

10:30-10:35 (five minutes)

Opening address

Mr. Kono Jun, deputy director-general for engineering affairs, Maritime Bureau, MLIT

10:35-10:55 (20 minutes)

“Japan’s Initiatives towards 2050 Carbon Neutral in International Shipping”

Mr. Tamura Akihiro, director, Ocean Development & Environment Policy Division, Maritime Bureau, MLIT

10:55-11:10 (15 minutes)

“Development of a Concept Design for ‘Ammonia-Fueled LNG-Fueled Vessel’”

Mr. Yamamoto Yasushi, general manager, Technical Group, Nippon Yusen Kaisha (NYK)

11:10-11:25 (15 minutes)

“MOL Group Environmental Vision 2.1”

Mr. Aoki Daisuke, research specialist in energy transition, Environment & Sustainability Strategy Division, Mitsui O.S.K. Lines (MOL)

11:25-11:40 (15 minutes)

“Introduction of Automated Kite Propulsion System ‘Seawing’”

Mr. Yamasaki Shinya, manager, Advanced Technology Development Team, Advanced Technology Group, Kawasaki Kisen Kaisha (“K” Line)

11:40-11:55 (15 minutes)

“GSC’s Initiatives Towards 2050 Net Zero Emissions of Shipping”

Mr. Hiramatsu Sai, senior researcher/head, Planning & Design Group, Planning & Design Center for Greener Ships (GSC)

Afternoon session: 13:00-15:15

13:00-13:15 (15 minutes)

“Carriage of Next-Generation Energy, ‘Hydrogen’”

Mr. Tominaga Haruhiko, R&D Department of Liquefied Hydrogen Carrier, Engineering Group, Ship & Offshore Structure Business Division, Energy Solution & Marine Engineering Company, Kawasaki Heavy Industries (KHI)

13:15-13:30 (15 minutes)

“MHI Initiatives for Decarbonization by CO2 Value Chain & LCO2 Carrier”

Mr. Tanaka Taichi, head, Marine Decarbonization Business Development Group, Strategic Planning and Operation Office, Mitsubishi Shipbuilding

13:30-13:45 (15 minutes)

“Introduction of JMU’s Semi-Sub Type Floater for Offshore Wind Turbine & OWF Service Vessel”

Mr. Yoshimoto Haruki, general manager, Offshore Wind Development Group, Ship & Offshore & Engineering Division, Offshore & Engineering Project Department, Japan Marine United (JMU)

13:45-14:00 (15 minutes)

“GHG Reduction with Naval & Marine Engineering”

Mr. Etokoro Kazutoshi, executive officer/general manager, Design Department, Mitsui E&S Shipbuilding

14:00-14:15 (15 minutes)

“Development of Ammonia-Fueled Engine”

Mr. Takahashi Shinsuke, director, IHI Power Systems

14:15-14:30 (15 minutes)

“Development of GHG Reduction Technology”

Mr. Hanamoto Kenichi, general manager, Technical Planning & Strategy Department, Daihatsu Diesel Mfg.

Mr. Miyachi Ken, manager, Carbon-Free Propulsion System Group, Research & Development Center, Mitsui E&S Machinery

14:30-14:45 (15 minutes)

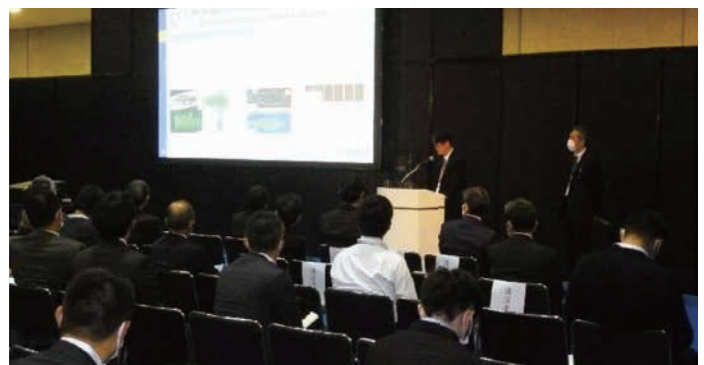
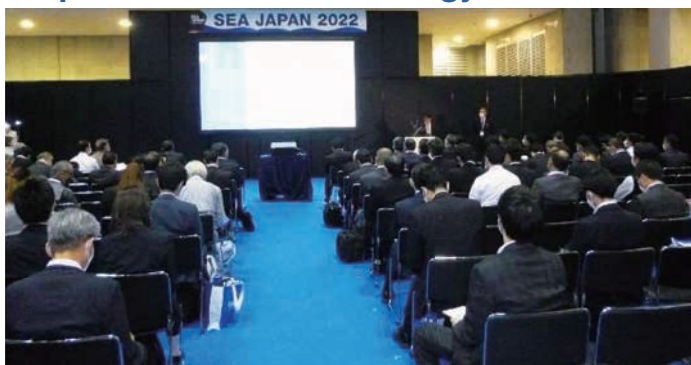
“Joint Development of Hydrogen-Fueled Marine Engines by a Consortium of Japanese Engine Manufacturers Towards Establishing a World-Leading Position”

Mr. Higashida Masanori, deputy senior manager, Reciprocating Engine Technical Department, Energy Solution Business Division, Energy Solution & Marine Engineering Company, KHI

Mr. Hamaoka Shunji, manager, Advanced Engineering Division, Development Division, Large Power Products Business, Yanmar Power Technology

Mr. Edo Koji, general manager, Development & Design Department/ Hydrogen Fueled Engine Development Office, Japan Engine

Ships and marine technology seminar



Event for Students



14:45-15:00 (15 minutes)

“Introduction of Hitachi Zosen’s Catalyst Technology for GHG Reduction”

Mr. Hikazudani Susumu, general manager, Decarbonization Catalyst Business Promotion Department, Marine Machinery & SCR Systems Business Unit, Carbon Neutral Solution Business Headquarters, Hitachi Zosen

15:00-15:15 (15 minutes)

“ClassNK’ Efforts Related to Safety Standard & Assessment for the Development of Zero-Emission Ships”

Mr. Nishifuji Koichi, deputy general manager, Technical Solution Department, Plan Approval and Technical Solution Division, ClassNK

2) Ship machinery and equipment industry event for students

Dates: Thursday-Friday, April 21-22, 2022

Locations: Various places at Tokyo Big Sight

Host: JSMEA

Participating institutions: Doshisha Univ., Kobe Univ., Kochi Univ., Nagasaki Institute of Applied Science, Osaka Metropolitan Univ., Tokai Univ., Tokyo Univ. of Marine Science and Technology and Tottori Univ.

Number of participants: 54 (including five instructors)

Schedule <Thursday, April 21>

Time	Details
12:30-12:50	Meeting time
13:00-13:15	Orientation
13:15-13:20	Opening address
13:20-14:45	<p>Presentations on the outlook of the Japanese maritime industry, including the ship machinery and equipment industry</p> <p>Presentation by a major shipping company “Structure of the Japanese Maritime Industry & Actions We Are Taking for the Future” Presenter: Mr. Sugimoto Yoshihiko, general manager, Technical Division, Headquarters of Technical Innovations, MOL</p> <p>Presentation by the top executive from a member company “Why is the DX of Ships Hot Now?” Presenter: Mr. Kondo Koichiro, chairman and president, JRCS</p> <p>Presentations by young, mid-career employees from member companies “Introduction of the Work to Design Marine Diesel Engines” Presenter: Mr. Sugimoto Ryota, Technical Department 2, Technical Management Division, Daihatsu Diesel Mfg.</p> <p>“Borderless Service Providers that Ensure Safe Operations” Mr. Ohara Toshiyuki, manager, Supply Network Division, Fuji Trading</p>

14:45-16:00 Visit to Sea Japan (a stamp rally was held.)

16:00-17:30 Visit to the JCG’s survey ship

<Friday, April 22>

Time	Details
10:00-12:00	Visit to Sea Japan (a stamp rally was held.)
12:00-12:50	Closing ceremony (a lottery for the stamp rally was held.)
12:50-17:00	Visit to Sea Japan

3) Public unveiling of a ship

Time and Date: 10:00-16:00, Friday, April 22, 2022

Location: Port of Tokyo’s Ariake West Wharf (a wharf right next to Tokyo Big Sight)

Cooperator: JCG

Details: Visit to survey ship “Heiyo”

Number of participants: 438

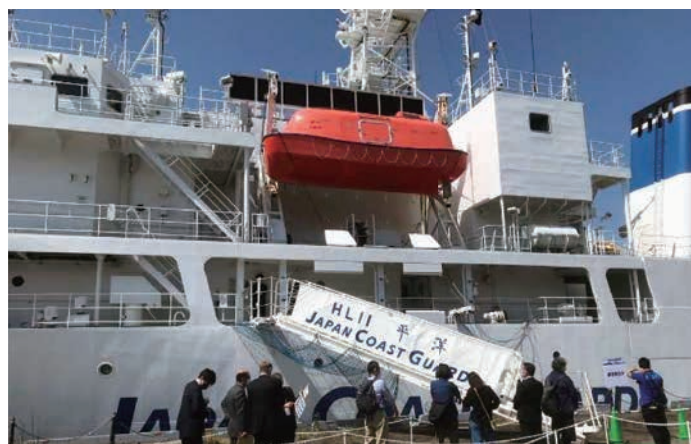
About the members’ zone (created by JSMEA)

Exhibition area: 1,503 square meters

Number of exhibitors: 64

Exhibitors: BEMAC Corp.; Chugoku Marine Paints, Ltd.; The China & Japan Marine Industries Ltd.; Daihatsu Diesel Mfg. Co., Ltd.; Daikin MR Engineering, Ltd.; Fuji Electric Co., Ltd.; Fuji Trading Co., Ltd.; Geislinger K.K.; Hisaka Works, Ltd.; Hitachi Nico Transmission Co., Ltd.; Ibuki Kogyo Co., Ltd.; IHI Power Systems; Iknow Machinery Co., Ltd.; Japan Engine Corp.; Japan Radio Co., Ltd.; Japan Weather Association; JFE Engineering Corp.; JRCS Co., Ltd.; Kamome Propeller Co., Ltd.; Kanagawa Kiki Kogyo Co., Ltd.; Kawasaki Heavy Industries, Ltd.; Kobe Kizai Co., Ltd.; Kokosha Co., Ltd.; Kosaka Laboratory Ltd.; Kyokuyo Electric Co., Ltd.; Manabe Zoki Co., Ltd.; Mitsubishi Heavy Industries Marine Machinery and Equipment Co., Ltd.; Mitsubishi Kakoki Kaisha, Ltd.; Mizuno Marine Co., Ltd.; Murayama Denki Ltd.; Musashino Co., Ltd.; Nabtesco Corp.; Nakashima Propeller Co., Ltd.; Naniwa Pump Mfg. Co., Ltd.; Nippon Hakuyo Electronics, Ltd.; Nishishiba Electric Co., Ltd.; N.Y. Co., Ltd.; NYK Trading Corp.; Okumura Engineering Corp.; Sasakura Engineering Co., Ltd.; Satake Corp.; Sekigahara Seisakusho Ltd.; Suction Gas Engine Mfg. Co., Ltd.; Sunflame Co., Ltd.; Shimada & Co., Ltd.; Shinko Ind. Ltd.; Shonan Co., Ltd.; Shoyo Engineering Co., Ltd.; Taiko Kikai Industries Co., Ltd.; Taiyo Electric Co., Ltd.; Takatori Seisakusho Co., Ltd.; Tanabe Pneumatic Machinery Co., Ltd.; Teikoku Machinery Works, Ltd.; Terasaki Electric Co., Ltd.; Tokyo Keiki Inc.; Tokyo Nisshin Jabara Co., Ltd.; Ushio Reinetsu Co., Ltd.; Utsuki Keiki Co., Ltd.; Woods Corp.; Yanmar Power Technology Co., Ltd.; Yamashina Seiki Co., Ltd.; Yamato Metal Co., Ltd.; YDK Technologies Co., Ltd.; and Yokogawa Electric Corp.

‘Heiyo’ opened to public



JSMEA attends Nor-Fishing 2022

The Japan Ship Machinery and Equipment Association (JSMEA) were joined by six member companies to Nor-Fishing 2022, held in Trondheim, Norway on Aug. 23-26.

The biennial event held since 1960, Nor-Fishing is one of the world's largest exhibitions for the fishing industry. In 2022, it welcomed some 15,000 visitors from Europe and other regions, representing ship machinery and equipment makers, design companies, shipyards, fishing instrument manufacturers and others.

JSMEA journeyed to Norway on its own in 2018 for its debut at Nor-Fishing, making 2022 the second time to attend the exhibition. But this time, its attendance was financially supported by The Nippon Foundation.

At Nor-Fishing 2022, JSMEA manned an exhibition booth together with six of its affiliated manufacturers, while also being active outside the venue by gathering and dispersing information: it attended a professional conference held the previous day; Mr. Ueda Shuzo, leader of its Overseas Fishing Vessel Market Development Working Group, met with people in fishing industries from around the world at a gala dinner given by the Nor-Fishing organizer; and the delegation inspected cutting-edge fishing vessels unveiled at nearby berths.

On Aug. 25, JSMEA interchanged with 15 individuals that included students from Japan who had enrolled at the Ocean Engineering Summer School sponsored by the Nippon Foundation Ocean Innovation Consortium. Faculty members from the Norwegian University of Science and Technology, which hosted the summer school, gave briefings on their nation's maritime industry and research activities that they were working on. Local enterprises participating in the program were also present and introduced themselves to JSMEA, who convened a meeting to exchange

opinions with these partners.

After Nor-Fishing 2022, JSMEA traversed to Alesund to visit VARD Søviknes—a local shipbuilder producing state-of-the-art fishing, offshore, cruise and other vessels—with four member companies. After the accompanying members showcased their respective products, the JSMEA delegation inspected facilities and equipment at the shipyard. It was allowed to go inside the engine rooms of a large trawler, which was having its shelving repaired, and an ice-breaker cruise ship, which was under construction.

JSMEA will report its participation in Nor-Fishing 2022 at a meeting of its Overseas Fishing Vessel Market Development Working Group where it will discuss future activities and other matters.

About Nor-Fishing 2022

Dates: Tuesday-Friday, Aug. 23-26, 2022

Venue: Trondheim Spektrum (address: Klostergata 90, 7030 Trondheim, Norway)

Number of visitors: 15,000 (announced by the organizer)

***Number of visitors to Nor-Fishing 2018:** 19,470

URL: <http://www.nor-fishing.no/?lang=en>

Attending JSMEA members: BEMAC Corp.; Daihatsu Diesel Mfg. Co., Ltd.; Maekawa Mfg. Co., Ltd.; Mikasa Corp.; Taiyo Electrics Co., Ltd.; and Yanmar Power Technology Co., Ltd.

About the Visit to VARD Søviknes

Date: Monday, Aug. 29, 2022

Accompanying JSMEA members: Daihatsu Diesel Mfg. Co., Ltd.; Maekawa Mfg. Co., Ltd.; Mikasa Corp.; and Yanmar Power Technology Co., Ltd.

Nor-Fishing 2022



Attendees of the Ocean Engineering Summer School by the Nippon Foundation Ocean Innovation Consortium visit the JSMEA booth.



JSMEA's booth



A battery-run sea farm support vessel is unveiled while Nor-Fishing 2022 is in session.



Booths are also run by a designer of fishing and other vessels, a Turkish shipyard building fishing vessels designed in Norway and so on.



The JSMEA delegation interchanges with students from the Ocean Engineering Summer School by the Nippon Foundation Ocean Innovation Consortium.



JSMEA members promote their products at VARD Søviknes.



The JSMEA delegation views a trawler having its shelving repaired at VARD Søviknes.



VARD Søviknes Yard Director Arnt Inge Gjerde (left) and JSMEA Overseas Fishing Vessel Market Development Working Group Leader Ueda Shuzo (right)



The visit to VARD Søviknes

JSMEA attends OTC 2022

The Japan Ship Machinery and Equipment Association (JSMEA) traveled to Houston, Texas for Offshore Technology Conference (OTC) 2022, held on May 2-5, with financial support from The Nippon Foundation. The OTC is one of the greatest exhibitions and conferences in the world for the offshore development industry. JSMEA has attended the OTC for two years running and for the ninth time since 2013.

At OTC 2022, JSMEA members were joined by compatriot partners in oil development. A total of nine companies and organizations set up a Japan Pavilion, where JSMEA members Daido Steel, Daihatsu Diesel Mfg., Fuji Trading, Shinko Ind. and Ushio Reinetsu joined hands with INPEX, JX Nippon Oil and Gas Exploration, Nippon Kaiji Kyokai (ClassNK) and Nippon Steel. They showcased Japanese-made offshore development-related products and exchanged information with visitors from other economies' offshore gas and oil development industries. At the conference, a basic design for a Japan Pavilion was adopted, as it was last time, to promote products and services under a unified brand image. Favorably located along the main hall's central aisle, the Japan Pavilion covered an area of 1,600 feet, for the most

extensive exhibition space ever manned by Japan at the OTC. With many people visiting the pavilion, the exhibitors were positive of the outcome. They remarked how the situation was returning to levels prior to the coronavirus pandemic, while others pointed to the many orders made for supply parts, components and materials. While some even said that proposals were made for new joint projects.

At OTC 2022, a total of 1,064 exhibitors from 39 countries and regions welcomed some 24,000 visitors, according to the organizer. It was held on a smaller scale—only in the main hall—as it was last year. Still, the conference was successful to some degree, although perhaps not as successful as it was in 2019, before the COVID-19 pandemic paralyzed the global economy, a source from the organizer said.

In comparison, at OTC 2019, there were 2,300 exhibitors from 100 countries and regions, which were visited by 59,200 people. OTC 2020 was cancelled. The numbers of visitors and exhibitors at OTC 2021 were not announced in the judgment of the organizer.

At OTC 2022, exhibitors who had forewent attending OTC 2021 returned with large booths, such as local offshore development businesses

Japan Pavilion



ABS Group, Baker Hughes and Schlumberger. Meanwhile, Kongsberg Maritime, Rolls Royce, Saudi Aramco and other overseas major players also showcased exhibitions on a big scale. National pavilions were set up by Brazil, Canada, France, Ghana, Guyana, Italy, the Netherlands, Norway, South Korea and the United Kingdom. Looking ahead at a post-COVID world, governments were very active in promotion.

At OTC 2022, technical sessions were held to mainly discuss decarbonization-related subjects, such as energy transfers and carbon footprints. Some of the sessions were attended by so many people that some had to stand. Presenters said that it is necessary to continue to produce oil and gas in the future and suggested that aggressive investments should continue to employ hydrogen, ammonia and other new fuels, to develop carbon-capture, -utilization and -storage (CCUS) technologies and to move on to wind and wave power generation as well as other green energy development, because net zero can produce big business opportunities. They also mentioned the hydrogen-formation and CCUS projects underway now in the United States.

At OTC 2022, there were only a few decarbonization exhibitions. Instead, products for offshore oil and gas development were main exhibitions. It is worth keeping an eye on how the offshore development market will advance and how the OTC will be held in and beyond 2023.

About OTC 2022

Official title: Offshore Technology Conference 2022

Dates: Monday-Thursday, May 2-5, 2022

Venue: NRG Park

About Japan Pavilion

Location: Booth No. 643 (main hall)

Members from JSMEA: Daido Steel Co., Ltd.; Daihatsu Diesel Mfg. Co., Ltd.; Fuji Trading Co., Ltd.; Shinko Ind. Ltd.; and Ushio Reinetsu Co., Ltd.

Members from the offshore development business: INPEX Corp.; JX Nippon Oil and Gas Exploration Corp.; Nippon Kaiji Kyokai (ClassNK); and Nippon Steel Corp.



An advertisement for the Japan Pavilion is posted at the OTC 2022 venue.

Japan Pavilion



JSMEA Takes Part in Posidonia 2022

The Japan Ship Machinery and Equipment Association (JSMEA) through financial support of The Nippon Foundation took part in Posidonia 2022, an international shipping exhibition organized in Athens, Greece on June 6-10, setting up a Japan Pavilion together with the Japan Ship Exporters' Association (JSEA) and Nippon Kaiji Kyokai (ClassNK). On behalf of JSMEA at the exhibition were Chairman Kinoshita Shigeki; Vice-Chairman Kuzu Tomoo, head of the Global Strategic Plan Review Board; Vice-Chairman Oda Masato, head of the Overseas Market Development Committee, who led a delegation of 15 member companies.

Posidonia was held for the first time in four years, since 2018. Although it was still guarded against the coronavirus pandemic, Posidonia 2022 went on to accommodate a total of 28,892 visitors, an increase of some 5,000 from its previous exhibition. The Japan Pavilion, located near the entrance of the

venue, also welcomed crowds throughout the event, including Greek ship owners and those from the maritime industries of other countries and regions. "Communication is smoother when we meet in person, helping us advance business talks more easily, although we have maintained interactions with customers online," JSMEA members sounded in agreement.

On Day 1 at Posidonia 2022, JSMEA Chairman Kinoshita was joined by Japanese Ambassador to Greece Nakayama Yoshinori, JSEA President Saito Tamotsu and ClassNK President and CEO Sakashita Hiroaki to cut the ribbon at the opening of the Japan Pavilion. After the ceremony, Ambassador Nakayama visited the exhibitors at the pavilion to learn about their respective business activities firsthand. The organizer's official opening ceremony of Posidonia 2022 was attended by Prime Minister Kyriakos Mitsotakis of the Hellenic Republic, who

Ribbon cutting at Japan Pavilion

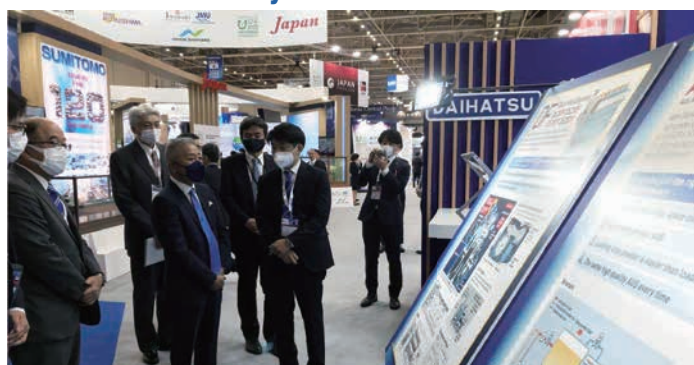


From left: ClassNK President and CEO Sakashita Hiroaki, Japanese Ambassador to Greece Nakayama Yoshinori, JSEA President Saito Tamotsu and JSMEA Chairman Kinoshita Shigeki

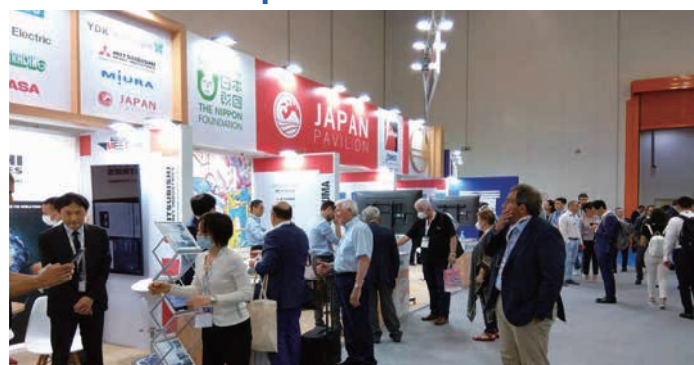
Ambassador Nakayama visits JSMEA exhibitors



Ambassador Nakayama visits JSMEA exhibitors



Exhibitors at Japan Pavilion



also visited the Japan Pavilion.

On Day 2, JSEA and the Japanese Embassy in Greece gave a joint reception at the ambassador's official residence. Some 50 people from the Japanese and Greek maritime industries got together and exchanged views on recent newbuilding market developments and other topics. At Posidonia, meanwhile, representatives from the Norwegian and Danish pavilions stopped by the Japan Pavilion and showed great interest in the efforts that Japanese enterprises are making to achieve decarbonization.

On Day 3, the Norwegian Pavilion hosted a reception and invited JSMEA Vice-Chairman Kuzu along with other executives. The JSMEA delegation exchanged opinions with Norwegian Ambassador to Greece Frode Overland Andersen and other individuals engaged in Norway's maritime affairs. Ambassador Andersen expressed Norway's desire to cooperate with Japan on many fronts, as they are important partners in the maritime business.

There were impressions throughout Posidonia 2022 that in the European maritime industry, commercial activities are growing positively in

light of a post-pandemic world. Many people from other countries and regions said they have high expectations and plan to keep an eye on the actions of Japanese businesses in achieving a goal of carbon neutrality by 2050. Posidonia is scheduled to be convened next time on June 3-7, 2024.

Numbers of exhibitors and visitors

Exhibitors: 1,964 (from 88 countries and regions)

Visitors: 28,892

Exhibitors from JSMEA: 15 (11 with space at the Japan Pavilion: Azuma Engineering (S) Pte Ltd.; BEMAC Corp.; Daihatsu Diesel Mfg. Co., Ltd.; Fuji Electric Co., Ltd.; Fuji Trading Co., Ltd.; Japan Engine Corp.; Mitsubishi Heavy Industries Marine Machinery and Equipment Co., Ltd.; MOL Techno-Trade, Ltd.; Ushio Reinetsu Co., Ltd.; Yanmar Power Technology Co., Ltd.; and YDK Technologies Co., Ltd.; three displaying panels: Mikasa Corp.; Shinko Ind. Ltd.; and Tobu Jukogyo Co., Ltd.; and one distributing a catalog: Miura Co., Ltd.

Exhibitors at Japan Pavilion



Representatives from Danish, Norwegian pavilions visit Japan Pavilion

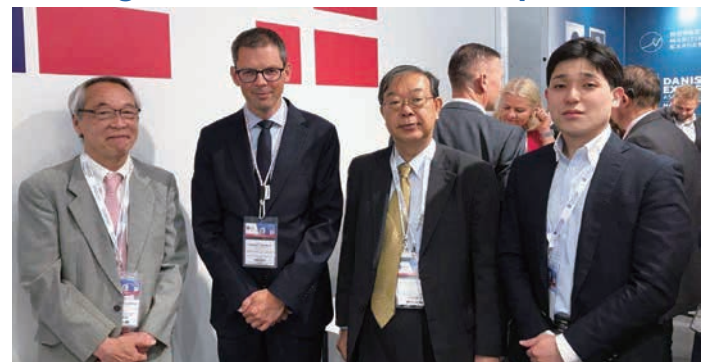


Representatives from Danish, Norwegian pavilions visit Japan Pavilion



Ms. Mie Jakobsen from the Danish Export Association (second from left) and Mr. Erlend Prytz from Norwegian Maritime Exporters (third from left)

Norwegian Pavilion Hosts Reception



JSMEA Vice-Chairman Kuzu Tomoo (left), Norwegian Ambassador to Greece Frode Overland Andersen (second from left) and JSMEA Executive Managing Director Ando Noboru (second from right)

JSMEA takes part in SMM Hamburg 2022

The Japan Ship Machinery and Equipment Association (JSMEA) took part in the SMM Hamburg 2022 with financial support from The Nippon Foundation. JSMEA Chairman Kinoshita Shigeki along with vice-chairmen Kinoshita Kazuhiko, Kuzu Tomoo, Hirose Masaru and Oda Masato led 20 member companies in setting up a Japan pavilion at the international maritime trade fair, held on Sept. 6-9, 2022.

The SMM Hamburg 2022 welcomed some 30,000 people, according to the organizer. The Japan pavilion and the other parts of the venue remained crowded throughout the period of the event, as visitors returned for the first time in four years since before the start of the coronavirus pandemic, which prevented the trade fair from being held. Many of the JSMEA members gave positive comments about the exhibition, saying that it gave them opportunities to meet with customers and talk with agents

in person.

On the morning of Day 1, Consul General Kato Kikuko from the Japanese Consulate General in Hamburg visited the Japan Pavilion after the organizer's opening ceremony. JSMEA's chairman, vice-chairmen and member companies gave her briefings on the exhibitions.

In the afternoon, JSMEA gave a seminar and held a networking reception at a local hotel. The seminar's topic was on the usage of wind power, which is drawing attention as a means to realize decarbonization. Lectures were given by Secretary-General Gavin Allwright of the International Windship Association (IWSA) and Executive Officer Yamaguchi Makoto of Mitsui O.S.K. Lines, Ltd. As the seminar focused on this timely subject, it naturally drew many individuals from Europe as well, with the total number of attendees—some of whom had to stand—exceeding 240, which was a much larger crowd than

Japan Pavilion holds seminar



MOL Executive Officer Yamaguchi Makoto gives a lecture.

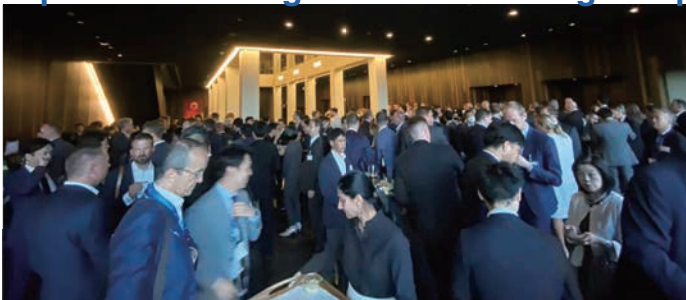


IWSA Secretary-General Gavin Allwright also gives a lecture.



With too many attendees, some are forced to stand.

Japan Pavilion organizes networking reception



expected.

At the beginning of the seminar, Chairman Kinoshita addressed the attendees, mentioning that prior to the opening of the SMM Hamburg 2022, JSMEA, joined by its member companies, visited local enterprises and organizations to exchange information and views on the latest efforts being made to accomplish decarbonization and digitalization. He reported that JSMEA signed a memorandum of understanding (MoU) at that time with Danish Maritime to enhance a partnership with the shipbuilding and ship machinery and equipment association.

JSMEA intends to remain active in promoting its members at exhibitions and on other occasions to foster relations between them and those from the European maritime industry.

About SMM Hamburg 2022

Dates: Tuesday-Friday, Sept. 6-9, 2022

Venue: Hall B7 (400 square meters), Hamburg Messe und Congress

Number of exhibitors: approximately 2,000 (according to the organizer)

Number of visitors: approximately 30,000 from some 100 countries and regions (according to the organizer)

About Japan Pavilion

Number of members: 20—**those with exhibitions:** 16 (BEMAC Corp.; Daihatsu Diesel Mfg. Co., Ltd.; Fuji Electric Co., Ltd.; Fuji Trading Co., Ltd.; IHI Power Systems Co., Ltd.; Japan Engine Corp.; JRCS Co., Ltd.; Kawasaki Heavy Industries, Ltd.; Mikasa Corp.; Mitsubishi Kakoki Kaisha, Ltd.; MOL Techno-Trade, Ltd.; Mikasa Co., Ltd.; Riken Corp.; Tokyo Keiki Inc.; and Yanmar Power Technology Co., Ltd.), **those displaying panels:** 3 (The Hanshin Diesel Works, Ltd.; Semco Ltd.; and Shinko Ind. Ltd.) and **those distributing catalogs:** 1 (Volcano Co., Ltd.)

About Japan seminar and reception

Time and date: 18:30-20:30, Tuesday, Sept. 6, 2022

Venue: Empire Riverside Hotel

Style: a seminar and a stand-up reception

Presenters at seminar: Secretary-General Gavin Allwright of the International Windship Association (IWSA) and Executive Officer Yamaguchi Makoto of Mitsui O.S.K. Lines, Ltd.

Number of attendees: approximately 240

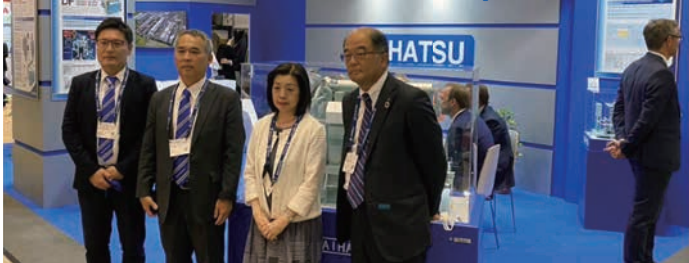


JSMEA Chairman Kinoshita Shigeiki delivers the opening address at the seminar.



The networking reception comes to an end with closing remarks by JSMEA Vice-Chairman Kuzu Tomoo.

Consul General Kato visits Japan Pavilion



Japanese Consul General in Hamburg Kato Kikuko (second from right) and JSMEA Chairman Kinoshita Shigeiki (right)

JSMEA Executive Managing Director Ando Noboru visits Japanese Consulate General in Hamburg



JSMEA Executive Managing Director Ando Noboru (left) and Japanese Consul General in Hamburg Kato Kikuko (center)

Japan Pavilion at SMM Hamburg 2022



The Latest Models of UEC Engines

Akasaka Diesels Limited has been manufacturing small and medium size of two stroke cycle UEC engines as a licensee of Japan Engine Corporation. We wish to introduce the latest two UEC engine models as follows.

● **Model: UEC33LSH-C2**

This engine model was developed as the successor model of UEC33LSII engine, which has been manufactured more than 120 units by Akasaka. This engine model has wide range of engine speed from low to high speed (145 ~ 230min⁻¹). Thanks to this advantage, this engine model can be applied to various type of vessels such as LPG carrier, Chemical tanker, Cargo carrier etc. This model is driven by mechanical system, however its performance is equivalent to that of electronically controlled engines. Better environmental preservation capability can be expected by reducing CO₂ emission. Regarding cylinder lubricating system, one of the systems can be selected by shipowner's preference among a simple conventional

lubricating system, J-MPL of high-pressure lubricating system and A-ECL of optimum electronically controlled lubricating system.

● **Model: UEC42LSH-Eco-D3-EGR**

This is an electronically controlled engine model developed as the successor model of UEC45LSE. Low pressure EGR (Exhaust Gas Recirculation) system is applied as the countermeasure for NO_x 3 requirements. Low pressure EGR system has the advantage of no effect to the turbocharger during switching of EGR ON/OFF operation and high load following capability. This model is proud of low fuel consumption rate as the top class among this class engines by fine tuning of the engine, reducing mechanical loss, minimum pressure loss brought by optimum scavenging and exhaust gas flow, and optimization of fuel injection system. This performance is enabling high capability of environmental preservation and economical operation.

Table 1 Main engine parameters

Engine model		UEC33LSH-C2	UEC42LSH-Eco-D3-EGR
Output range	kW	1,775 ~ 6,200	3,175 ~ 10,080
Engine speed	Min-1	145 ~ 230	85 ~ 118
Number of cylinders	-	5 ~ 8	5 ~ 8
Cylinder bore	mm	330	420
Stroke	mm	1,050	1,930
Fuel consumption rate (P1)	g/kWh	172.0	167.1 (Tier II) 167.2 (Tier III)

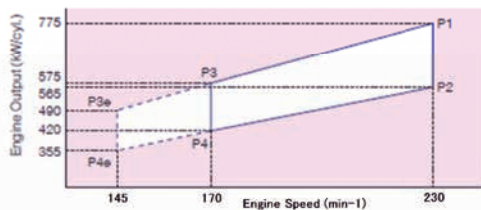


Figure 1 UEC33LSH-C2

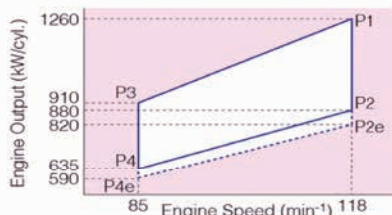
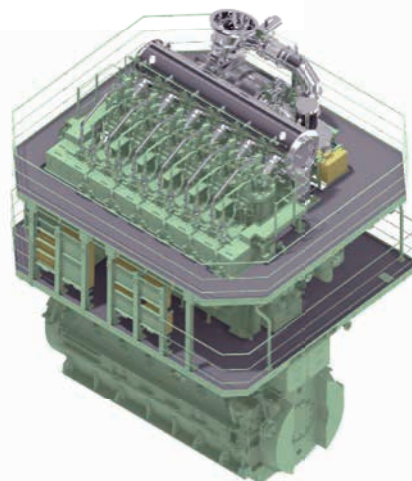


Figure 2 UEC42LSH-Eco-D3-EGR





Best fit for MASS (Maritime Autonomous Surface Ship) Introducing Wind Sensor Auto Selector and Marine Wind Web Logger

Providing marine anemometers for more than 50 years, ANEOS Corporation now introduces Wind Sensor Auto Selector (SS-10) and Marine Wind Web Logger (WU-101M).

With the recent increase in the size of ships, wind turbulence may occur due to the influence of the hull shape and structure, and it may not be possible to measure the correct wind direction and speed.

Unwanted turbulence caused by the influence of the hull shape and structure is increasing with the recent increase in the size of ships, which makes correct wind speed and direction observation difficult. The Automatic Marine Anemometer Switcher (SS-10) automatically selects a less affected anemometer from the two anemometers installed at different positions such as starboard side, port side, bow, and stern of the mast to observe by indicator, Navigation Equipment. It can also be switched manually, in case if one of the anemometer malfunctions. This Wind Sensor Auto Selector can be retrofitted on existing anemometers.



The Marine Wind Web Logger (WU-101M) webifies wind speed and direction data, any computers connected to onboard LAN can browse the anemometer data. The data can be displayed on usual web browser, no special software is required.

<Features>

- Record and print data
- Alarm at two levels of wind speed
- Retrofittable to existing anemometer
- NMEA output
- Remote (land) browsing, if communication unit (LTE, etc.) is connected



ANEOS Corporation

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TEL: +81-3-5768-8251 FAX: +81-3-5768-8261

URL: <https://www.aneos.co.jp> E-mail: oversea@aneos.co.jp

EVP - PTFE Bearing for Water Lubricated Stern Tube System

We offer rubber bearing (EVR) for water lubricated stern tube system and have rich track records.

EVP is a low friction and low wear bearing developed based on the technology of EVR experience, and used PTFE (Poly-Tetra Fluoro-Ethylene) as the sliding face.

Structures

The bearing has 3-layer structure, PTFE, rubber and outer shell.

The sliding face is made of PTFE which has excellent self-lubricity and excellent heat resistance, the outer shell is made of reinforce plastic with glass cloth (=GRP), the rubber which has excellent flexibility is applied between outer shell and PTFE.

GRP of outer shell and rubber are same materials as EVR.

Features

1. Low Friction Material

- 1) PTFE used for sliding face is well known as a low friction material, and even in our bench test, it indicated very low friction coefficient of about 0.001. (Test Condition: Shaft Diameter=100mm, Shape=Plane, Bearing Pressure=2MPa)
- 2) Since PTFE has self-lubricity and low static friction, reducing the load at startup.
- 3) Since lower friction coefficient than rubber bearings, which reduces fuel consumption.

2. Bearing Pressure Resistance

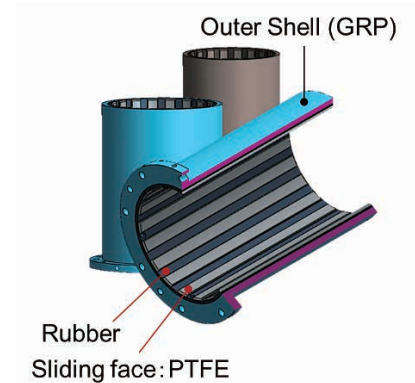
The allowable nominal bearing pressure is 0.6MPa, which is more than twice that of rubber bearings. (obtained class approval)

3. Wear Resistance

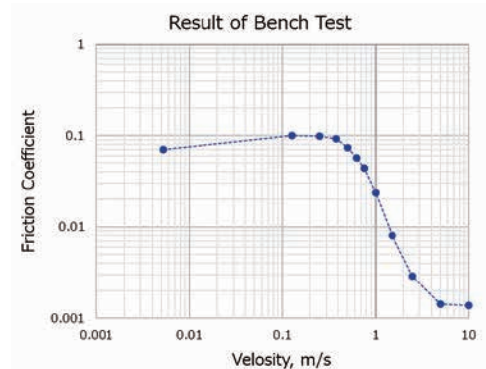
- 1) Lifetime is more than twice that of rubber bearings.
- 2) Sleeve wear is reduced because it is less aggressive to the mating material than rubber bearings. (Reduced to less than 1/3 of rubber bearings)

4. Easy Handling

- 1) The handling is much easier at light weight compared with handling the metal material, because reinforced plastic is used for the outer shell. (about 1/4 weight of the copper outer shell)
- 2) In the same way as our rubber bearing "EVR", it will fit closely with stern tube by outer shell material expansion from water absorption. Therefore, there is no need to press fit to the Stern Tube and it can be inserted into the stern tube by clearance fit.



Test Equipment of 100mm shaft Dia.



Test Equipment of 300mm shaft Dia.



First aid kit for your ship

① When you are in trouble...
OMG!

② You will waste a lot of time to...
find necessary repairing materials.

③ Repair materials are quite complicated to use.
You have to try several times to find suitable item.

④ Then you may feel like...
"What a waste of time...! Isn't there an all-in-one repair kit??"

⑤ Don't worry Here I am...!

This is SHIP+AID®
I got your back !!

⑥

⑦ take me there!
I know I can be your help!

⑧ You can always count on me for any troubles...
Especially **ship's repairs!!**



N.Y.Co.,Ltd.

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All Electric Grab Dredge Crane & Hybrid Marine Cranes For Dredging, Lifting, Piling, and Rock Breaking works

Overview

SKK Corporation has been manufacturing marine cranes for over 60 years in Japan. The basic design of SKK cranes is using an engine and an omega drive (transmission), and the capacity is from **5 to 32M3 dredging**, and/or **up to 700 ton lifting**.

We also developed hybrid system for all electric dredge crane and basic engine type dredge crane.

All Electric Grab Dredge Crane: The Largest Line Pull Capacity 160Ton

All Electric Grab Dredge crane without an engine, GE Series, driven by the electric power to be supplied from the vessel.

It is able to stock energy to capacitors by grab lowering, and reuse the energy for hoisting. This hybrid system leads to reduce fuel consumption, Exhaust Gas, CO2, Vibration, and Noise.



GE Series (All Electric Crane with Hybrid System)

Attachment Options

- Flat dredging control system
- Rock breaking controlled by disk brake
- Automatic grab opening brake
- Dredging engineering control(GPS) system, and more.

Other Cranes

All SKK cranes are custom-made.

We can combine 2 uses in ONE crane.

(ex. add lifting hooks to dredge crane or add piling leader to lifting crane)

Please visit our website below or contact us for any questions.



SKK Corporation

1-3 YOKOHAMA-NISHIMACHI, KOCHI-CITY, KOCHI, JAPAN 781-0242

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URL: <http://www.sk-k-crane.co.jp/en> E-mail: sales@sk-k-crane.co.jp



TAKECOAT Series

-Great Wall for Corrosion-

TAKENAKA's original coatings, TAKECOAT-1000, and TAKECOAT-CERAMIC1 have excellent and unique property which provides a lot of advantages for being used in harsh environment of various fields/industries in the world.

TAKECOAT-1000

- Resistance to rust and corrosion
- Long term durability
- Lubricity
- Sustainable for even seawater and desert area

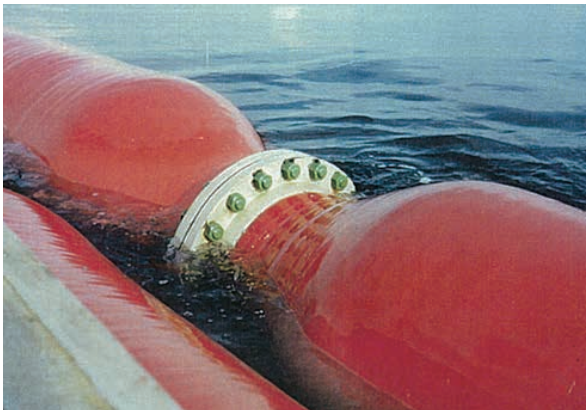
TAKECOAT-1000 is a fluorocarbon polymer surface treatment with powerful anti-rusting, anti-corrosion properties. It was created by combining precoating under treatment and fluorocarbon polymer coating technologies to enhance the adhesion of the metal/film interface, and impart anti-rust and anti-corrosion properties despite being thin. Because TAKECOAT-1000 has a low fastening torque coefficient value, it prevents contact corrosion between different types of metals.

TAKECOAT-CERAMIC1

- Heat resistance up to 450°C
- Thermal shock resistance
- Stable fastening

Created by combining base treatment technology with a uniquely developed ceramic process for inorganic polymer, TAKECOAT-CERAMIC1 provides powerful heat resistance and long-term durability. The inorganic, heat-resistant resin film is extremely thin, between 20 and 30µm, and because TAKECOAT-CERAMIC1 has lubricant properties, it does not catch on screws and so provides favorable performance during fastening.

Application of TAKECOAT-1000 for Marine Hose



TAKECOAT-1000

Fluorocarbonpolymer Coating

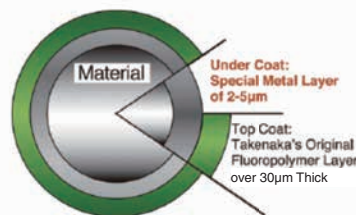


TAKECOAT-CERAMIC1

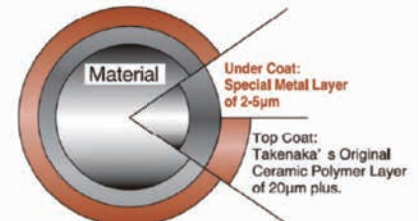
Ceramic Coating



TAKENAKA's original two layer coating system



TAKECOAT-1000



TAKECOAT-CERAMIC1



TOBU JUKOGYO CO.,LTD.

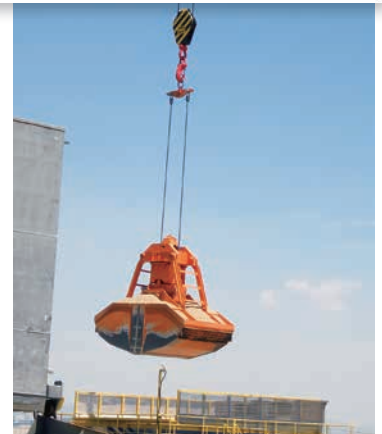
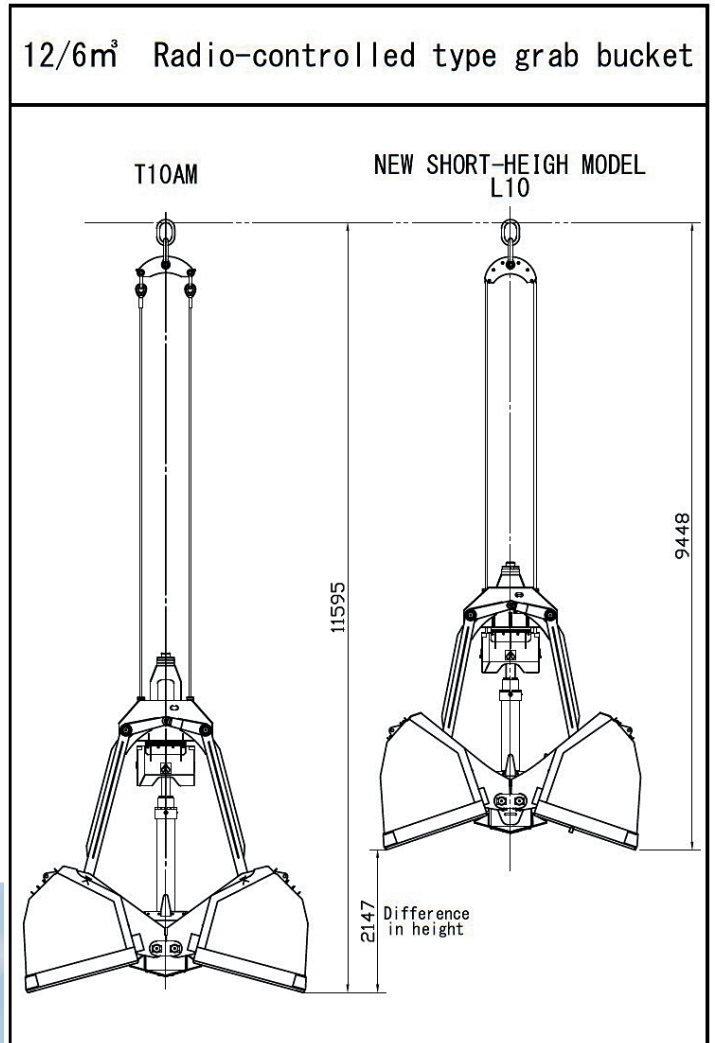
Radio-controlled type grab bucket New Short-height Model "L10"

TOBU JUKOGYO CO., LTD. is a company with the knowledge and experience manufacturer of grab bucket loading solutions to its global client-basis.

The Radio-controlled type grab bucket enables loading/discharging bulk cargo from ship to shore, and vice versa, by connecting any type of crane hook without power supply during operation. In some cases, customers cannot keep enough clearance while discharging cargo to hopper due to grab height.

To reduce such cases and improve the efficiency of cargo handling operations, we have developed a new short height model "RSHC-12060L10".

This new model contributes to shorten loading and unloading cycle time. And it has also been highly evaluated and a lot of customers has already enjoyed its merits.



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for detail



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JSMEA signs MoU with Danish Maritime

The Japan Ship Machinery and Equipment Association signed a memorandum of understanding (MoU) with Danish Maritime on Sept. 2, 2022 toward a strong partnership in accelerating decarbonization and promoting digitalization and autonomous ships. Danish Maritime comprises some 150 Danish enterprises that design and construct ships, provide ship machinery, equipment and relevant services and so forth.

In recent years, the maritime industry has been required to take immediate actions to address climate change, such as the use of new fuels and the development of energy from offshore wind power generation. Safe ship operations are now more strongly in demand at a time when the world is running short of seafarers. As such, the hope is for the realization of autonomous ships with digital technologies. As a framework of cooperation to this end between economies advancing in maritime affairs, the governments of Japan and Denmark have increased interchanges since signing a memorandum of cooperation on maritime affairs in 2017.

Taking advantage of the bilateral partnership agreement between Tokyo and Copenhagen, JSMEA and Danish Maritime signed the MoU to encourage their nations' maritime industries, including the ship machinery and equipment sector, to closely interchange with each other, exchange information and so on in the fields of decarbonization and in particular digitalization.

JSMEA Chairman Kinoshita Shigeki gave an address at the signing ceremony, expressing JSMEA's delight and pride in having signed the MoU with Danish Maritime. He said the agreement would be certain to encourage the Japanese and Danish maritime sectors that include the ship machinery and equipment industries to share views and information often on decarbonization and digitalization. This, he concluded, will enhance their respective technologies, supply excellent products that support ships around the world and contribute to the growth of the global maritime industry and economy.

Danish Maritime CEO Jenny N. Braat retorted that the MoU was an important step forward for the maritime industries of both Denmark and Japan. Although they are distant geographically,

they are of one mind in making the global maritime industry more conscious of climate change, she said, adding that by joining forces in different ways, they can better help each other. Denmark and Japan take common responsibility but have different competitive advantages, she continued. The CEO emphasized on behalf of member companies that she hopes for stronger partnerships with their Japanese counterparts.

The signing ceremony was attended by some 30 individuals, equally from Japan and Denmark, including officials from the Japanese Embassy in Denmark and the Danish Ministry of Foreign Affairs and Embassy in Japan who had provided help with arrangements for the conclusion of the MoU.

While in Denmark, JSMEA Chairman Kinoshita, Vice-Chairman Kuzu Tomoo and Overseas Fishing Vessel Market Development Working Group Leader Ueda Shuzo were joined by three member companies to visit local organizations and enterprises. They shared information and opinions on the up-to-date efforts being made in Japan and Denmark to achieve decarbonization and digitalization.

JSMEA's Global Strategic Plan Review Board and Overseas Market Development Committee intend to conclude MoUs with more partners in the future to cooperate at higher levels with more customers and other relevant parties across the globe, including ship owners and shipbuilders.

Organizations and enterprises JSMEA visited in Denmark:

Ministry of Foreign Affairs (and Shipping Lab), Maersk Mc-Kinney Moller Center for Zero Carbon Shipping, DFDS, MAN Energy Solutions and A.P. Moller-Maersk

Members of JSMEA delegation: JSMEA Chairman Kinoshita Shigeki, Vice-Chairman Kuzu Tomoo, Overseas Fishing Vessel Market Development Working Group Leader Ueda Shuzo, Executive Managing Director Ando Noboru and other staff members together with representatives of Daihatsu Diesel Mfg. Co., Ltd.; the Japan Ship Centre; Tokyo Keiki Inc.; and Yanmar Power Technology Co., Ltd.



The MoU is signed by JSMEA Chairman Kinoshita Shigeki (left) and Danish Maritime CEO Jenny N. Braat.



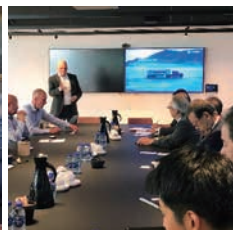
Special Advisor Joachim Arup Fischer (standing, left) and Director Ann Hougaard Jensen (standing, right) from the Ministry of Foreign Affairs' Investment in Denmark



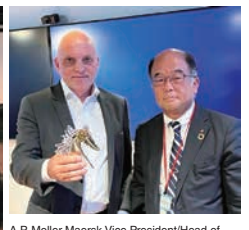
CEO Bo Cerup Simonsen of the Maersk Mc-Kinney Moller Center for Zero Carbon Shipping



DFDS Director/Head of Sustainable Fleet Project Jesper Fløgen delivers a presentation.



The JSMEA delegation holds discussions with A.P. Moller-Maersk executives.



A.P. Moller-Maersk Vice President/Head of Fleet Technology Ole Graa Jacobsen (left) and JSMEA Chairman Kinoshita Shigeki (right)



JSMEA

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