



The Ship of The Year 2002 Award goes to the *Tempera*



The Society of Naval Architects of Japan (SNAJ) has awarded its Ship Of the Year 2002 Award to the 106,034DWT Aframax tanker, *Tempera*, built by Sumitomo Heavy Industries, Ltd. (now Sumitomo Heavy Industries Marine & Engineering Co., Ltd.: SHI ME) for Fortum Oil & Gas OY of Finland. The award ceremony took place at the Nippon Kaiun Club in Tokyo on July 22.

A fishing training ship and coastal chemical tanker received the associated awards. The former was evaluated for the beautiful design and the latter for the first employment of an electric propulsion system in a coastal ship.

The *Tempera* is the world first Double Acting Tanker (DAT) which concept was a result of Kvaerner Masa-Yards' study. The *Tempera* navigates stern ahead in frozen ice conditions and bow first in open water. The navigation speed is about five to six knots in level ice with a thickness of about one meter, and 15 knots in normal sea conditions.

The *Tempera* is also the largest tanker in the world to

be built to the Ice Class 1A Super classification. The hull construction and ice breaking performance conform to the Ice Class 1A Super requirements stipulated by the Finnish Maritime Administration (FMA) and LRS.

The *Tempera* is equipped with a podded azimuthing propulsion unit that can rotate 360 degree at the stern of the ship. The podded propulsion system ensures safe navigation in the seas, especially in the many islands around Finland.

Principal particulars of the *Tempera*
Ship type: Crude oil and oil product carrier
Length, o.a.: Approx. 252.00m
Length, b.p.: 230.00m
Breadth, mld.: 44.00m
Depth, mld.: 22.50m
Designed draught, mld.: 14.50m
Scantling draught, mld.: 15.30m

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Kawasaki completes first pressure build-up type coastal LNG carrier *Shinju Maru No. 1*

Kawasaki Shipbuilding Corporation has delivered the 2,500m³ LNG carrier, *Shinju Maru No. 1* (HN: 1529), to the domestic co-owners, Corporation for Advanced Transport and Technology and Shinwa Chemical Tanker Kaisha, Ltd.

The vessel is the first pressure build-up type coastal LNG carrier built in Japan. Kawasaki constructed the cargo tank and handling section that constitutes the core part of the carrier, and Higaki Shipbuilding Co. installed the core part in the hull built by Higaki.

The LNG carrier has two pressure build-up type cylindrical LNG cargo tanks (total containment capacity: 2,500m³) for convenience in short distance transport. Kawasaki's rich experience in LNG carrier construction is fully demonstrated in the *Shinju Maru No. 1*.

The main features are:

Two independent cylindrical tanks are laid down horizontally in the respective cargo compartments. Each LNG containment tank can absorb contraction due to the cryogenic temperature without effect on the hull construction. Heat isolation is achieved by the special insulating system.

Pressure build-up tank construction has sufficient capacity to accumulate the pressure of the boil-off gas

(BOG), and no leakage of BOG occurs from the tanks. Cargo tank compartments employ double hull construction for both shipside and bottom, ensuring safety measures against an accident such as collision or stranding. The tank covers are used to shield the LNG tank tops and shut out the outer heat. The carrier is equipped with a main diesel engine because BOG treatment (use as fuel for main marine boiler) is unnecessary.

Principal particulars

Length (o.a.):	86.29m
Length (b.p.):	80.30m
Breadth, mld.:	15.10m
Depth, mld.:	7.00m
Draught, mld.:	4.171m
GT:	2,936t
DWT:	1,781t
Cargo capacity:	2,513m ³
Main engine:	Hanshin Diesel LH36LA diesel x 1 unit
MCR:	1,912kW x 270rpm
Speed, service:	Approx. 12.7kt
Complement:	13
Classification:	NK



IHIMU completes double hull VLCC

IHI Marine United Inc. (IHIMU) has delivered the 300,610DWT double hull crude oil carrier, *Tsurumi* (HN: 3071), to Kei Enterprise Incorporation of Panama at its Kure Shipyard. After delivery, the vessel entered crude

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DWT at scantling draft: Approx.

106,000MT

GT: Approx. 64,200

Service speed, open water: Approx.

15.4 knots (15% sea margin at designed draft)

Service speed, ice condition:

Approx. 8 knots (in channel ice at scantling draft)

Main propulsion machinery

Type: Electric motor-driven podded azimuthing propulsion unit

MCR: 16,000kW

Complement: 29

oil transport service between the Middle East and Japan.

Continuing the last series of 280,000 and 300,000DWT typedouble hull VLCCs, IHIMU has developed the latest design of VLCC to achieve maximum hull form with maximum draft to pass the Strait of Malacca, Malaysia, so-called Malaccamax, reflecting operation conditions for many Japanese VLCC operators. The *Tsurumi* is the first of IHIMU's latest design of VLCC. Five more of the same type of VLCC has already been ordered by Japanese operators,

to be built at the Kure Shipyard.

Principal Particulars:

L (o.a.) x L (b.p.) x B x D x d: 333.00m x 324.00m x 60.00m x 29.00m x 20.529m

DWT/GT: 300,610t/159,610t

Main Engine: DU-Sulzer 7RTA84T

MCR: 27,160kW x 74.0rpm

Speed, service: 16kt

Classification: NK

Completion: July 8, 2003



MHI delivers Ferry *Yamato* to domestic owner

The 13,353GT ferry, *Yamato*, which was constructed by Mitsubishi Heavy Industries, Ltd. (MHI) for Hankyu Ferry Co., Ltd., is now plying between Shin Moji and Izumi Otsu.

The ferry can accommodate 667 passengers and load 229 trucks and 138 passenger cars, offering a comfortable 12-hour trip between the two cities at a service speed of 23.5 knots.

The *Yamato* was designed to provide larger capacity and faster service to cope with the modal shift from land to coastal transport. For the preservation of the environ-

ment, CO₂ and NO_x emission from the ferry is suppressed. Barrier-free construction is provided for disabled or elderly people together with safety provisions, to enhance the seagoing experience.

The ferry has sufficient public spaces including observation decks, bathrooms, promenades, restaurants, shower rooms, kids rooms and pet rooms. The accommodation quarters consist of four special rooms and 44 first class rooms, 12 Japanese style and 22 Western style. Another 91 rooms are provided for second-class passengers and drivers.

Principal particulars

Length, o.a.:	195.0m
Breadth, mld.:	26.4m
Depth, mld.:	9.90m
Draught, mld.:	6.7m
GT:	13,353t
Main engine:	Wartsila 16V-38B x 2 sets
Speed, service:	23.5kt
Carrying capacity	
Passengers:	667
Trucks:	229 units
Passenger cars:	138 units



Sanoyas develops STF to decrease energy consumption by 6%

—Effect confirmed on two newbuildings—

Sanoyas Hishino Meisho Corp. has confirmed the effect of the Sanoyas Tandem Fin (STF: patent pending) on energy saving for ship propulsion. The energy consumption can be decreased by 6% maximum. The effect was confirmed on two newbuildings, which were built at its Mizushima Works and Shipyard.

The STF is mounted on both sides of the stern shell before the propeller as shown in the photo. This can be attached to both newbuildings and

existing vessels. Sanoyas will employ the STF for newbuildings as a standard spec.

Tandem fins are arranged at different heights and at a certain distance. The forward fin suppresses generation of turbulent flow at the stern keel. Thus, resistance due to the turbulent flow is decreased, and the water flow before the propeller becomes uniform, increasing propulsion efficiency.

The fins are made of steel plate with

a length of about propeller diameter. The plane of fins has the same shape as that of the keel contour. This idea is simple and not costly for energy saving, and superior in cost effect.

The STF was already attached to a 55,000DWT bulk carrier and 115,000DWT tanker, both delivered this year by Sanoyas, and good results have been obtained from these vessels. As a result, owners of the vessels hope to install the STF on their other ships.



MES achieves 2.53 million ps in diesel construction in FY2002

—Total production since 1928 reaches 41.92 mil ps—

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) built 2.53 million ps of diesel engines corresponding to 122 units at the Machinery Factory of the MES Tamano Works in fiscal 2002. The record was 130,000 ps greater than that of FY 2001, 2.40 mil ps with 122 units. The larger output achievement for 2002 reflected the increase in larger bore engines (98cm diameter) built for container carriers. Total production since 1928 has now reached 41.92 mil ps.

MES now estimates that the high engine production level will continue for the time being. In April this year, MES added one more test bed to the eight current test beds for the No. 1 Assembly Shop, with a total of 11 test beds including the two test beds be-



Annual Engine Production for the Last Five Years

1998	112 units	1,770,000 ps
1999	78 units	1,260,000 ps
2000	99 units	1,670,000 ps
2001	122 units	2,400,000 ps
2002	122 units	2,530,000 ps

To our readers

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longing to the No. 2 Assembly shop.

With such a setup, the company aims to facilitate production and shipment. Annual delivery will increase by 20 units, or an increase of 200,000 to 300,000ps in production. New installations include the test bed, piping work, hydraulic braking unit, etc. The investment amounted to about 200 million yen.

MES first entered into a technical license agreement with Burmeister & Wain of Denmark in 1926 and built the first engine in 1928. Since then the company has continued B&W engine production and attained the record of 40 million ps in July 2002. The company will now produce diesel engines of 2.50 million ps per year boosted by stable demand.

Order received for large marine diesels from China

MES has received an order for three large marine diesel engines from Hudong-Zhonghua Shipbuilding (Group) Co. Ltd. (HZ) of Shanghai, China, via Mitsubishi Corp., a Japanese trading house. The Mitsui-MAN B&W 12K90MC-C engines will be mounted on the 5,688TEU container carriers to be built at the Chinese shipyard. The order includes two more options. Three diesel engines will be

delivered to the customer from February to June 2004.

MES obtained an order for eight diesel engines of the same type from China in 2000. Six of these have already been delivered to HZ as scheduled. Four of the six are now operating smoothly on large container carriers and are highly evaluated by the operator.

Specifications of Mitsui-MAN B&W 12K90MC-C

Output:	54,840kW(74,520ps)
Speed;	104rpm
No. of cylinders:	12
Piston diameter:	900mm

MES Tamano Shipyard authorized by MLIT for aluminum ship construction

The Ministry of Land, Infrastructures, and Transport (MLIT) has authorized the Tamano Shipyard of Mitsui Engineering & Shipbuilding Co., Ltd. (MES) as a specialized workshop for aluminum ship construction.

The Tamano Shipyard is the first works to obtain the authorization based on simplified shop inspections and the like, previously required for construction processes of aluminum alloy hulls.

The authorization proves that the Tamano Shipyard complies with the strict requirements of MLIT for the layout of the facility and equipment, inspection system, the number of engineers, construction management system, and construction procedures.

The Tamano Shipyard has built various types of aluminum alloy hull ships for the last 15 years. Expertise

for engineering, fabrication, and erection has been accumulated, and the high level of the expertise was highly evaluated by the MLIT examination for the authorization.

The Shipyard will begin construction of the Techno Super Liner (TSL) this August. The ship is a ultra-high speed passenger/cargo ship to ply be-

tween Tokyo and the Ogasawara Islands, and will use an aluminum alloy hull. Upon completion, the ship will be the world's largest aluminum alloy ship.

MES will begin construction of the largest aluminum hull ship TSL (below) of over 40 knots at the newly authorized shipyard



The Japan Ship Centre (JETRO) in London is the overseas representative office of the Japan Ship Exporters Association (JSEA). Apart from providing a local channel of communication to the JSEA, it acts as a first point of contact to the Japanese shipbuilding industry and an information provider to the European industry. Five years since first establishing a web presence in 1998, the JSC will unveil a new website at the beginning of September 2003.

The main objective of the renewal

Re-launch of Japan Ship Centre website

www.jsc.org.uk

was to transform the website into a frequently updated news and information resource that users will want to return to on a regular basis. Other focus areas included improving the site's usability and accessibility by employing intuitive easy-to-use navigation, by choosing a modern clean design, and ensuring that pages are quick to

download even for users connecting to the internet by modem.

What tangible benefits are there for users of the new site? Firstly, they will be able to obtain the latest news emerging from

the Japanese shipbuilding and ship-machinery industries much more efficiently than before.

Secondly, they will be able to take advantage of a revamped links section containing listings for Japanese shipbuilding and related companies operating offices in Europe. It is anticipated that new entries will be added to this list based on enquiries most frequently received by the JSEA and the JSC.

Regular readers of Sea Japan will also be pleased to know that 60 issues of the newsletter - going back five years - will be available to download free.

Another feature will be easy access to a wide range newbuilding statistics issued from the Maritime Bureau of the MLIT. Finally, a web-mail form will make it easier for users to send questions or otherwise contact the Japan Ship Centre. This feedback will also be employed as the basis for future development of the site.



New website image of the Japan Ship Centre, London

MOL Endeavor

Owner: Lunar River Line S. A.
Builder: IHI Marine United Inc.
Hull No.: 3164
Ship Type: Container Ship
L (o.a.) x B x D x d: 294.13m x 32.26m x 19.03m x 13.54m
DWT/GT: 61,441t/53,096t
Main Engine: DU SULZER 9RTA96C diesel x 1 unit



Container carrying capacity: 4,500TEUs
Speed, service: 24.5kt
Classification: NK
Completion: June 26, 2003

Crystal Marine

Owner: Kumiai Navigation (Pte) Ltd.
Builder: Kawasaki Shipbuilding Corporation
Hull No.: 1518
Ship type: LPG carrier
L (o.a.) x L (b.p.) x B x D x d: 227.50m x 222.00m x 37.20m x 21.00m x 11.20m
DWT/GT: 53,395t/45,801t
Cargo hold capacity: 80,138m³



Main engine: Kawasaki-MAN B&W 7S60MC-C diesel x 1 unit
Speed, service: 17.0kt
Classification: NK
Completion: June 30, 2003

Gas Capricorn

Owner: Gas Diana Transport Inc.
Builder: Mitsubishi Heavy Industries, Ltd.
Hull No.: 2179
Ship type: LPG carrier
L (o.a.) x B x D x d: abt. 230m x



36.60m x 20.80m x 10.60m
DWT/GT: abt. 48,898t/46,021t
Cargo hold capacity: 78,934m³
Main engine: Mitsubishi-7UEC60LS diesel x 1 unit
Speed, service: abt. 16.7kt
Classification: NK
Completion: June 30, 2003

Shin Heiryu

Owner: Thebe Maritime S. A.
Builder: Universal Shipbuilding Corp.



Ship No.: 228
Ship Type: Ore/bulk carrier
L (o.a.) x L (b.p.) x B x D x d: 299.95m x 290.00m x 50.0m x 24.10m x 17.88m
DWT/GT: 203,315t/101,953t
Main engine: MAN B&W 6S70MC (MARK VI) diesel x 1 unit
Speed, service: 14.5kt
Classification: NK
Completion: June 30, 2003

Cape Glory



Owner: Cape Glory Shipping S. A.
Builder: Namura Shipbuilding Co., Ltd.
Hull No.: 229
Ship type: Bulk carrier

L (o.a.) x L (b.p.) x B x D x d: 288.97m x 279.00m x 45.00m x 24.40m x 17.955m
DWT/GT: 177,173t/89,529t
Main Engine: B & W 6570MC (Mark6) diesel x 1 unit
Speed, trial max.: 17.4kt
Classification: NK
Completion: June 12, 2003

Chemroad Vega



Owner: Eiko Maritime S. A.
Builder: Shin Kurushima Dockyard Co., Ltd.
Hull No.: 5193
Ship Type: Chemical carrier
L (o.a.) x B x D x d: 174.38m x 27.70m x 16.0m x 11.0m
DWT/GT: 34,528t/20,035t
Main Engine: 6UEC52LS diesel x 1 unit
Speed, trial max.: 15.0kt
Classification: NK
Completion: June 12, 2003

Hiryu

Owner: Olamar Navegacion S. A.
Builder: Oshima Shipbuilding Co., Ltd.
Hull No.: 10343
Ship Type: Bulk carrier
L (o.a.) x B x D x d: 188.50m x 32.26m x 17.15m x 12.14m
DWT/GT: 52,982t/29,413t
Main Engine: KAWASAKI-MAN B&W 6S50MC-C diesel x 1 unit
Speed, trial max.: 14.5kt

Classification: NK
Completion: June 18, 2003

