



### Anticipating Customers Needs

Conventional shipbuilding has generally centered on the construction of one-off vessels tailored to the particular specifications of each customer. For greater efficiency, however, Universal Shipbuilding uses its extensive experience and research to analyze the specific uses and routes of ships, based on which specifications are developed to satisfy a wide range of needs. The company has already produced several innovative new vessel types, including the Malacca-max VLCC oil tanker with maximum load capacity for the Straits of Malacca, the Setouchi-max 200,000-DWT bulk carrier and the Unimax Ore 300,000-DWT dedicated ore carrier. Going forward, Universal Shipbuilding will continue to introduce highly practical, state-of-the-art vessels that anticipate the ever-changing needs of the market.



HUGO N, Unimax ore carrier delivered in January 2011

## Universal Shipbuilding Corporation

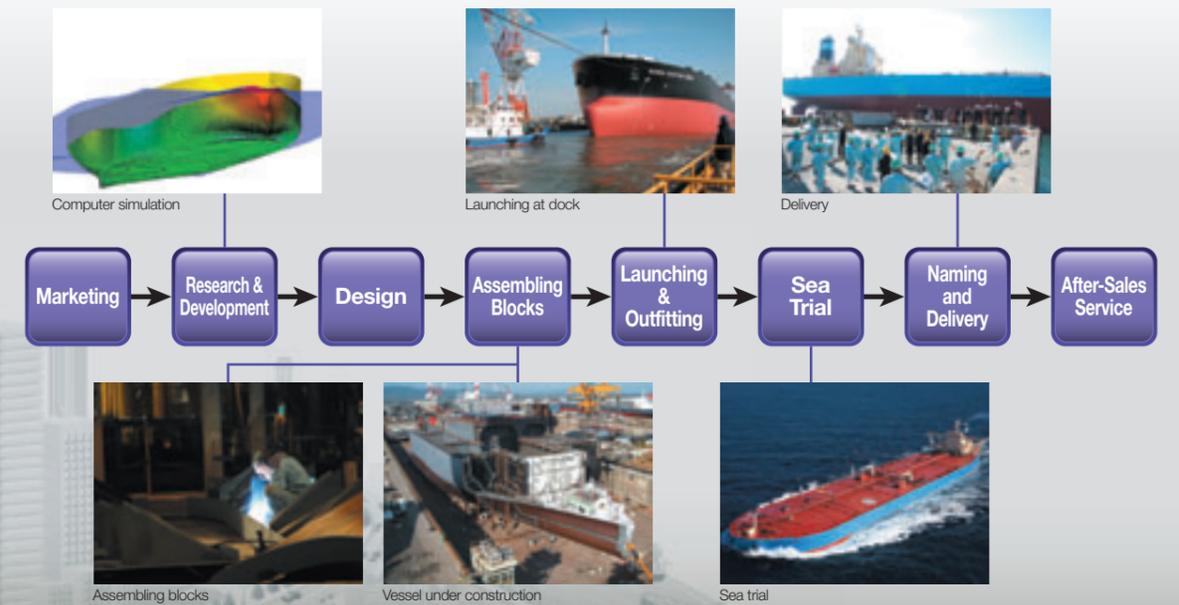
**Our mission is to build ships that meet the diverse requirements of customers worldwide and thereby provide vital support for marine transport and the economic growth of nations, particularly emerging economies.**



Leveraging our superior technical knowhow, we produce high-quality vessels at some of Japan's largest and most productive shipbuilding facilities. We are now placing a special emphasis on the development of next-generation, energy-efficient vessels that offer superior fuel efficiency and environmentally friendly features to help minimize CO<sub>2</sub> emissions due to the increasing movement of cargo by ship.

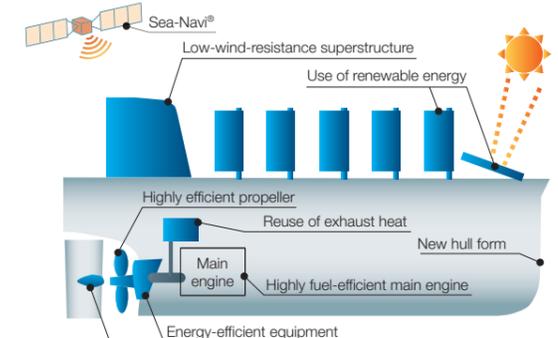
**Shinjiro Mishima** President & CEO

### Shipbuilding Process



### Development of Green Ships

The development of energy-efficient technologies is an integral part of our mission. To date, we have patented a number of environmentally friendly technologies and equipment, including the LEADGE-Bow\*, SSD, Surf-bulb, Sea-Navi® (similar to car navigation systems), low-wind-resistance superstructures and a hybrid electric-generation system. In 2010, we set up the Green Ship Planning Department to develop advanced green ships by refining existing technologies and incorporating renewable-energy systems, as well as coming up with innovative applications of new technologies. By 2020, we aim to be producing next-generation vessels offering 50% less GHG than current vessels.



\* LEADGE-Bow: Acutely streamlined bow to reduce wave resistance and thereby reduce fuel consumption by 2%–6%.



Universal Shipbuilding Corporation

# Highlights 2010



**Products** Icebreaker Shirase named 2009 Ship of the Year

The Japan Society of Naval Architects and Ocean Engineers awarded our icebreaker Shirase with the prestigious title of 2009 Ship of the Year. The society recognized our historical achievements with icebreakers, which include the launch of this new model 25 years after its predecessor, as well as our continuing efforts to introduce new technologies.



**Products**

**Completion of 180-ton AHTSV**

Anchor-handling tug supply vessels (AHTSVs) are designed specially to tow rigs used for drilling platforms in offshore oil fields. Our newest AHTSV offers a robust towing capacity of 180 tons, compared to 150 tons in the previous model.



**Products**

**First FRP minesweeper launched**

Universal Shipbuilding, the only domestic company that builds minesweepers for the Japan Maritime Self-Defense Force, launched the country's first minesweeper made of fiber-reinforced plastic (FRP), which has replaced wood as the main building material in these vessels.

**Products**

**Decontamination system supports disaster relief**

The Japan Ground Self-Defense Force used a decontamination system manufactured by Universal System & Machinery Co., Ltd., a Universal Shipbuilding group company, to support relief efforts in the disaster area following the Great East Japan Earthquake.



**Construction**

**Japan's first ballast water management system installed**

Our new system incorporates technologies we will offer to enable customers to comply with new regulations envisioned as the result of an international convention due to enter into force, which will stipulate stricter procedures for discharging potentially harmful ballast water at loading ports. The system is expected to be installed increasingly in existing ships.



**Research & Development**

**Consecutive building of PSVs commenced**

We launched our ongoing construction of platform supply vessels (PSVs), which are outfitted with wide decks and various tanks for the specific purpose of transporting materials to offshore oil drilling platforms or other offshore structures.



**Construction**

**New painting plants built**

Due to the introduction of more stringent international standards for vessel painting, our shipyards newly invested in their painting works to either upgrade existing plants or build all-new facilities.



APRIL 2010    JUNE    JULY    AUGUST    SEPTEMBER    OCTOBER    NOVEMBER    DECEMBER    JANUARY 2011    FEBRUARY    MARCH

- Green ship planning department set up, and targets halving greenhouse gas emissions by 2020.
- New dormitories and company housing completed in Tsu Shipyard.

- Shirase (built in Maizuru Shipyard) selected 2009 Ship of the year.

- FY2009 business results and performance in-house awards.
- R&D results presentation.

- Participation in Maizuru Port Festival.
- Keihin Shipyard staff and families tour Shirase.
- Procurement Department holds strategy-sharing conference.

- Family festival held.

- Innoshima Shipyard installs Japan's 1st ballast water management system.

- Keihin Shipyard launches Japan's first FRP minesweeper.
- Ariake Family Festa held.

- Welding techniques shared through companywide event.

- Participation in Eco-Products 2010.
- Maizuru Shipyard commences consecutive building of PSVs.

- Keihin Shipyard completes its first 180-ton AHTSV.
- Agreement signed for joint research into nano-emulsion fuel.

- Next-generation-leader presentation

- Decontamination system supports post-earthquake relief efforts.
- New painting plant completed at Ariake Shipyard.