

monitoring of the state of the ice fields in the area of the ship's operation. Sailor provided two VHF DSC sets, two MF/HF systems and a 6110 GMDSS system. Transas supplied both the S and X-band Navi-Radars and the ice radar is a Sigma S6. Two ECDIS sets are also by Transas as is the AIS transponder. The gyro is from Sperry.

Two Rolls-Royce winches are carried on board the vessel. Forward is a TW

3000/800/AW 34U3 unit with 200m of 64mm Lancforce rope, a 12-strand braided rope, made of Dyneema® yarns, whilst aft is a TWH2100/400 winch fitted with 700m of 56mm steel rope. The towing hook is a Mampaey DCX 70/100 and there are two DMT aft capstans. A Heila deck crane with the capacity to lift 18 tonnes at 75m is also fitted.

The rescue boat is a Hatecke RB400 which

is launched and recovered by a Vestdavit PLR-3600.

Yuribey is protected by a comprehensive selection of products from International Paints and a system of W and O type fendering from Trelleborg.

The vessel has tanks to accommodate 170 tonnes of fuel oil and 20 tonnes of fresh water.

Andy Smith

ATB combo couples tug to largest hopper dredge built in US

Eastern Shipbuilding Group has delivered a dual mode articulated tug/barge (ATB) trailing suction hopper dredger to Great Lakes Dredge & Dock Company (GLDD). With the tug part of the arrangement named *Douglas B Mackie*, it honours GLDD's former CEO and chairman of the board, while the hopper dredger barge is named *Ellis Island* after New York's famous entry point.

The tug was designed and engineered by Ship's Architect, Inc, while the barge was detail designed by Bay Engineering. Both vessels are based on concept designs by Ocean Tug & Barge Engineering.

Brian D'Isernia, CEO of Eastern Shipbuilding Group, said: "We are particularly proud of constructing this ATB dual mode trailing suction hopper dredger for Great Lakes Dredge & Dock Company, LLC as it is the largest hopper dredger built in the United States to date."

David Simonelli, president, dredging division at GLDD, said: "We are excited to take delivery of this advanced vessel which improves the competitiveness of our hopper group and represents a substantial reinvestment in our fleet."

Even to those inexperienced in ATB concept or with hopper dredger barges, this new combination offers some obvious advantages. The barge itself measures 433ft x 92ft x 36ft (132m x 28m x 11m) and has a capacity of 15,000 cubic yards (11,500m³) using a dredge system powered by a pair of EMD engines each developing 5,000hp. The barge has two Schottel fixed pitch electric tunnel thrusters at the bow.

The tug, *Douglas B Mackie*, has overall dimensions of 158.3ft x 52ft x 32.75ft (48.26m x 15.85m x 9.98m), and employs a propulsion system comprising a pair of MaK 12m32C-T3 main engines each developing 7,831hp. The vessel has two 2,500kW shaft generators backed by an auxiliary generator comprising a Caterpillar C32-T3 of 730kW and an emergency set, a Caterpillar C18, of 550kW.

The tug and barge are united by means



of of two Articouple coupler systems from Taisei Engineering.

Up to 26 people can be accommodated in 18 single cabins and four twin berth units. Common spaces include a lounge, well equipped exercise room, stainless steel galley and mess. The boat will carry a full-time chef.

The tug's wheelhouse contains a comprehensive array of marine electronics including two Furuno radars (X and S-band) alongside an AIS and electronic chart display from the same manufacturer. In addition, it has a Beier Radio single station DP system and a Simrad AP70 autopilot. Furuno also figures in the communications fit-out with an FM radio and Satellite compass while Sailor provided the internet systems.

In announcing the delivery of the new combination in November, Eastern said:

"Eastern is proud to assist Great Lakes in delivering this investment in the maritime future of America, constructing these two state-of-the-art Jones Act vessels to meet the country's growing needs."

The Great Lakes ATB hopper dredger will be a key tool in performing the restoration of the eroded land mass in the Gulf Coast states. Additionally, the vessel's ability to cost-effectively deepen and maintain navigable waterways will bolster the US' competitive position in world trade, as the nation's ports move forward with deepening plans to accommodate the larger vessels, which will sail through the expanded Panama Canal.

Great Lakes Dredge & Dock Corporation is the largest provider of dredging services in the US and the only US dredging company with significant international operations. Great Lakes Dredge also owns and operates the largest and most diverse fleet in the national dredging industry, comprising some 200 specialised vessels. **AS**