Jaya Holdings, operators of Singapore’s leading offshore shipbuilding yard, has delivered a new state-of-the-art anchor-handling tug supply vessel, *Jaya Supreme*, to Canadian buyers, Atlantic Towing Ltd, part of the J D Irving Ltd group of companies. A delivery ceremony at Jaya’s shipyard in Singapore’s famed shipbuilding district of Tuas was attended by senior executives from both Jaya and Atlantic Towing.

“*Jaya Supreme* is the largest and most advanced vessel to be built at our shipyard,” confirmed Siew Koon Lim, president, Shipbuilding & Shiprepair, at Jaya. “A challenging task, it is therefore a source of great pride for us to deliver a vessel of such complexity to the precise requirements of our client.”

The vessel, now re-named *Atlantic Kestrel*, is among the most sophisticated offshore vessels ever built in Singapore. Measuring 85.2m overall with a beam of 22m and a maximum draft of 7.6m, the vessel is DNV-classed as a Tug, Supply Vessel to Ice Class 1A and Dyn Pos-Autr.

Seng Fatt Kwan, senior vice president, Engineering, said: “*Jaya Supreme* was an amazing challenge. The huge amount of automation and the new notations made this a ground-breaking project for my team. All of us are so proud that Jaya has delivered a vessel of such sophistication on time, within budget, and exceeding the design performance parameters.”

George Horsington, president, Business Development, Jaya Holdings, said: “Production of oil and gas in shallow waters like the Java Sea has peaked, so the oil majors have moved into deeper waters. Offshore drilling has taken off in difficult and remote locations like the North Atlantic, Greenland, the Russian Arctic Sea and the Barents Sea. Exploration in such areas requires support ships to meet the challenges of harsh environments. The delivery of *Jaya Supreme* sends a clear signal we are ready and able to supply the technically-advanced vessels needed.”

Propulsion power is provided by a pair of Wärtsilä 12V32 main engines, each developing 6,000kW at 750 rev/min. These drive 4,300mm diameter controllable pitch propellers inside special high-efficiency nozzles. This arrangement gives the vessel a bollard pull of 211 tonnes and a free-running speed of 16 knots. The main engines also power the FiFi1 fire-fighting and water curtain system supplied by FFS AS of Norway.

The main generators are a pair of 790ekW Caterpillar units and there is a 440ekW Volvo Penta harbour/emergency set. In addition, there are two 2,300ekW shaft generators. Wärtsilä also provided the four electrically-driven CPP tunnel thrusters – two 1,100kW units at the bow and two 850kW units at the stern. *Jaya Supreme* is a VS4622 design from Wärtsilä Ship Design’s Norwegian office (formerly Vik Sandvik), with Clean Design notation from DNV that limits air emissions and sea pollution, and a green passport to enhance future recyclability. For work in areas close to the Arctic Circle, the vessel has DNV’s Ice Class 1A notation, applicable for ships operating in broken channels made by breakers in first-year ice or in open waters with small floes. It also complies with Comf-V(3) Class, which keeps noise and vibration levels within strict parameters. Comfort Class is typically found on passenger ships rather than OSVs, demonstrating strong commitment to the welfare of its crew complement.

The accommodation, which caters for a maximum of 45 persons, is fully air-conditioned and every cabin has en suite facilities. On the first (main) deck there is a large changing room with lockers and separate WC and shower compartments. A laundry, hospital, sauna and gymnasium are all accessed from this room. In addition there are two four-person cabins on this level. A-deck features a large mess room, two day rooms, the galley, a duty mess and numerous stores. B-deck is given over entirely to crew cabins with 11 twin berth rooms and three singles. C-deck has one more double and seven singles. D-deck offers generous quarters for three officers, providing suites with separate bedrooms and generous 1.428m wide berths. The day cabin of each has a desk, settee seating and coffee tables. There are also two offices (one large enough to take a conference...
Anchor-handler for cold and shallow waters

Silverburn Shipping, headquartered on the Isle of Man, has taken delivery of a BV Ice Class anchor-handling tug for operations in the Caspian Sea. The basic design was produced by Worldwise Marine Engineering BV of The Netherlands with detailed drawings produced by the shipbuilder, Sefine Shipyards, based in Yalova, Turkey.

Measuring 49.6m x 15.8m, but with an operating draft of just 2.5m, the vessel, which has been named Arctic, is powered by a pair of QSK60-M Cummins diesel engines, each developing 1,641kW at 1,800 rev/min. This power is transmitted via Reintjes LAF 873 gearboxes to Berg four-bladed controllable pitch stainless steel propellers of 2,100mm diameter turning inside Kort nozzles. A Berg 370kW bow thruster is also fitted. The vessel attains a bollard pull in excess of 45 tonnes and a free-running speed of 12 knots.

Cummins also supplied the vessel’s auxiliary power through two 335kW generator sets and back up is by a 113kW harbour and a 135kW emergency set. This latter unit is housed on main deck. The fire-fighting system, to meet the requirements of FiFi1, is powered from the front end of both main engines via PTOs and is supplied by Marsis (Skum), Turkey’s first external firefighting equipment provider which is also Tuzla-based.

The accommodation is designed for 20 persons (eight crew plus 12 passengers) in 10 cabins, each with en suite facilities. All the ship’s officers and passengers are housed on the forecastle deck, where there is also a ship’s office. The galley and separate mess are on main deck alongside some crew cabins.

The bridge is well-equipped, mainly with Furuno electronic equipment including MF/HF radio, two Felcom 15 Inmarsat Cs, two radars, echosounder, Navtex, and GPS. Exceptions include a Tokyo-Keiki gyrocompass, a magnetic compass from the same manufacturer, Alphatron autopilot and Danelec ECDIS. A tracked chair in the centre of the horseshoe-shaped main console gives the helmsman easy access to all the controls and instrumentation.

The main anchor-handling towing winch at the forward end of the aft deck is a Cargotec waterfall configuration unit. The towing drum has capacity for 750m of 44mm wire whilst the anchor-handling drum can carry 500m of the same size wire. Other items of deck machinery include a tugger winch, Karm fork with hydraulic towing pins and a stern roller. A Heila deck crane is located approximately halfway along the timber deck on the starboard side, with 7 tonnes @ 18m outreach capacity. The rescue boat has its own dedicated launching and recovery davit manufactured by Gürdesan.

The owners believe that their experience working in shallow waters in ice conditions, and a close working relationship with the design team, has delivered a remarkably cost-effective unit for shallow draft work in ice environments whilst giving the optimum load capacity.

To ensure the best ice capability, a 100%-scale model was fully tank-tested in ice conditions at Aker Arctic Technology’s state-of-the-art facility in Helsinki, allowing the hull form, propeller, rudder and bow thruster arrangements to be refined for optimal performance.

The vessel has sufficient tank space for around 900m³ of liquids, of which 421m³ is fuel and 118m³ is for fresh water, although the vessel carries its own fresh water maker. AS