

# Twin-track innovators



Melanie Dayasena reports on the market leading contracts that are both environmentally friendly and offer owners cost savings



*Azamara Journey*, above, with the Ensolve PL630M inset

Below: the Evac OnlineMax

Wastewater manufacturers are developing systems that are both environmentally friendly and produce cost savings to entice new cruise customers to their doors.

EnSolve Biosystems has completed installation of a biomechanical bilge treatment system for a second *Azamara Cruises* ship.

The cruise operator selected the EnSolve PetroLimiter 630M oily water separator system for *Azamara Quest* following successful sea trials of a unit fitted on *Azamara Journey* last year. "The original trial was for six months but after three months [the operator] liked it so much they went ahead and purchased the system and immediately bought the second PetroLimiter for the *Azamara Quest*," explains Jason Caplan, president and chief executive, EnSolve Biosystems.

*Azamara Quest's* system was installed and commissioned by EnSolve's distributor Hyde Marine during operation of the vessel. Commissioning trials showed effluent levels of less than one part per million (ppm), he says. The system onboard *Azamara Quest* can process about 20 m<sup>3</sup> of wastewater per day.

The system uses green technology, a high priority among cruise operators. "A lot of competing systems use membranes and coagulants that generate quite a few hazardous materials which have to be disposed of and add additional expense and waste to landfill. Our technology does not have membranes or coagulants so there is very little hazardous material as a result of the treatment. There is a small amount of oil that is collected for stage one and that can be recycled," says Mr Caplan.

The system on *Azamara Journey* achieves effluent levels well below the cruise line's

internal threshold of 5 ppm for overboard discharge, according to Mr Caplan.

"Compared to the old mechanical oily water separators, data gathered aboard *Azamara Journey* indicates efficiency levels that translate to significant annual savings per ship in operational costs related to maintenance, labour, hazmat disposal and shoreside pumpout of waste tanks," he explains. On other similar vessels the operating cost savings have amounted to about \$100,000 per year per ship.

Benefits of the PetroLimiter include its user-friendliness. EnSolve normally goes onboard for the first few days to train the crew on how to run the system. "The only thing they really have to do is add a slow release nutrient tablet that provides nutrient supplements to keep the microbes thriving."

Other advantages include cost savings and reliability.

"Not one of our clients has ever been fined and not one has decommissioned our system," reveals Mr Caplan.

Evac has won the contract to supply dry and wet waste handling systems onboard Royal Caribbean International's (RCI) *Project Genesis* and *Project Genesis II*. The company will supply 4,030 toilets and five collecting units (25 m<sup>3</sup> each) per ship, according to Juha Kiukas, vice-president sales, Evac.

It will supply the ships with the new Evac OnlineMax technology, which separates the air from the wastewater in an efficient air/liquid separator pipe prior to entering the dedicated air and wastewater pumps. ➔

