The offshore and marine industry here may be buffeted by strong headwinds, but SeaTech Solutions is betting its money on developing new, cutting-edge product designs for its customers.

One product the marine design company is working on - in collaboration with a research institute under the Agency for Science, Technology and Research (A*Star) - is an energy-saving device using waste heat for diesel engines in ships.

"The efficiency of traditional diesel engines typically doesn't cross 50 per cent," Mr Dilip Sarangdhar, the firm's technical director, told The Straits Times.

"When an engine runs, more than half the energy is lost as heat. But we're aiming to recover part of that energy and use it to power ship systems for more efficient use of fuel."

SeaTech had approached A*Star's Institute of Materials Research and Engineering about three months ago for assistance in developing such specialised products amid the downturn in the industry.

This will also help give them an edge over competitors, as companies vie neck-and-neck for a share of the rapidly softening market, added director and founder Govinder Chopra.

"The industry is going through a critical phase, but we're taking advantage of the slack to develop innovative designs and solutions. We're trying to raise the bar," he said.

The firm hopes to be able to come up with a prototype by the middle of next year.