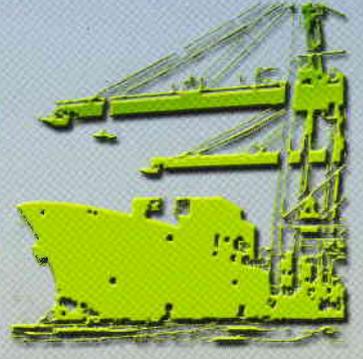


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Winged Air Induction Pipe offers huge savings to ship owners



Installing the WAIP air-lubricated hull system can lead to significant long-term gains in efficiency

The recent invention of the Winged Air Induction Pipe (WAIP) by Professor Yoshiaki Takahashi of R & D Engineering, Japan, has addressed the pressing contemporary maritime problems of fuel costs and environmental emissions specifically as well as providing a range of other benefits which include reduced hull growth, increased vessel speed, increased vessel operational range, reduced docking costs, smaller main engine gearboxes and ancillary equipment on new builds, and longer antifouling paint life.

If this sounds too good to be true, it is because Professor Takahashi has invented a revolutionary technology – an air-lubricated hull system, reducing frictional drag through the water, using Ultra Fine Microbubbles (UFM).

Studies since 1991 by Professor Takahashi noted that compressor powered bubbles for frictional drag relied on an air-pressurising process that used 71 percent of total energy for internal energy increase. Therefore, even with the world's most efficient compressors it was not considered commercially viable to produce bubbles for frictional drag reduction in this way.

The WAIP is the first invention to create continuous UFM at a low cost suitable to nearly all types of vessels.

The Winged Air Induction Pipe, as the name suggests, uses the properties of high and low pressure created by the unique patented wing design as well as the air induction properties created through the Kelvin Hemholtz Instability Method (KHIM).

The WAIP technology science is complex, but the results are simple. The smaller the bubble the more it clings to a surface. UFM cling even better.

The WAIP is a one-size-fits-all, removable, robust device approximately 300mm by 150mm by 35mm, made of either steel, bronze or polycarbonate, depending on the use, and is fitted to the bow section of the vessel.

The placement and number of WAIP units is calculated by R & D Engineering which ensures all design an installation is carried out as per their instructions.

The WAIP technology is currently in use on a number of vessels throughout the world, ranging from 35-metre to 280-metre ferry and cargo vessels, and these vessels are in class with a number of IACS Societies.

Fuel savings range from ten to 25 percent, depending on vessel design, speed and horsepower. Individual calculations are done for each vessel.

The cost of the WAIP technology is based on 50 percent of the fuel saving of the vessel in the first year. The fuel saving is calculated on actual data gathered during sea trials and authenticated by a third party, usually a class surveyor or representative. The sea trial calculations and fuel savings are agreed to by the ship owner, R & D Engineering and the third party, and this is used as the basis of the remuneration for the WAIP technology.

All WAIP installation and survey costs are to the shipowners account.

Example: A recent WAIP offer to a large Australian bulk carrier for one of their Cape-size vessels can be used as an example to show indicative costs.

Vessel fuel saving, fully loaded at 15.1 knots, would be 19 percent, which equates to an approximate saving of over US\$1 million per year, or more, depending on vessel usage. The technology cost would be 50 percent of this saving, leaving over US\$500,000 to purchase and fit the WAIP units. This means that the WAIP could well be cost neutral for the first year with savings over US\$1 million each year after that. Reduced hull growth can also yield very large savings in time and money for the ship owner when in dock.

For further information contact:
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The Marshall Islands is now ranked third largest open registry

The Marshall Islands Registry moved into position as the world's third largest open registry with more than 52.3 million gross tonnes and 2,102 registered vessels.

The World Fleet Monitor, published by Clarkson Research Services, ranked the Marshall Islands as third in its January 2010 launch issue. According to the publication, the Marshall Islands was also the fastest growing of the top four registries last year.

The Registry, which is administered by International Registries, Incorporated (IRI), attributes its success to the continued decentralisation of registry services to its 20 worldwide offices, its client service ethos and the fact that it continues to post top safety and environmental scores with global port states.

To that end, the Marshall Islands Registry remains the only major open registry to be included on the US Coast Guard's Qualship 21 roster for four years in a row. The registry also maintains its white list status on both the Paris and Tokyo MoUs. Clarkson's also notes in the World Fleet Monitor that the Marshall



Bill Gallagher, President, International Registries, Incorporated (IRI)

Islands has the youngest fleet among the top ten registries.

"We are delighted that the registry's growth trend continues to point upward and pleased to have an excellent complement of owners and operators registered with the flag. One of the trends we have been watching is the tonnage coming into the registry and where it is coming from. In 2009, we saw more than

70 percent of the tonnage entering the registry as newbuilding tonnage, whereas in 2008, only 50 percent was newbuilds. Not surprisingly, newbuilds engaged in the energy sector of the market make up 70 percent of this tonnage," said Bill Gallagher, President.

"The registry's more than 200 employees in its 20 regional offices continue to provide global reach and local service. This worldwide support network enables our clients to keep their ships moving," he concluded, forecasting continued growth in the future.

Note: The World Fleet Monitor excludes merchant vessels under 100 gross tonnes, yachts, non-propelled, inland water way, fishing, and military vessels. It also excludes fixed and mobile platforms and barges primarily used for drilling and production in the offshore energy sector with the exception of FPSOs and drillships. Visit www.crsl.com/wsm for more information.

For further information contact:
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