

HARRIS PYE SINGAPORE – LEADING SPECIALIST IN MARINE & INDUSTRIAL BOILERS

Harris Pye Singapore Pte Ltd, set up in 1993, is part of the Harris Pye Engineering Group headquartered in the United Kingdom. Today, the Harris Pye Group is one of the world's leading specialists in repair of marine and industrial boilers, including all associated steam systems for the marine, offshore and oil & gas sector.

Harris Pye Group, which started in 1976 with a staff of ten, has grown to over a thousand employees in the UK and main stations in Singapore and Dubai. The Group has 18 offices and repair facilities operating 24/7 throughout the world, including in Australia, Japan, China, the Americas and throughout the Middle East and Europe. Its team offers a full and comprehensive worldwide inspection and reporting service for marine boiler plants, turbines, steam chests and valves.

In recent years, Harris Pye has undergone substantial growth and diversified into other activities that are complimentary to its core business. This was achieved through internal expansions and acquisition of companies. The company has moved into the offshore oil and gas industry undertaking projects in repair, upgrade and conversion of rigs, semi-submersibles, trading tankers and FPSO/FSO/FSU/FSRU units. It also provides inspection and consulting services for the LNG industry.

The company's expertise also extends to automation and control engineering, electrical work, high and low voltage, construction steel works, high and low pressure pipe work, specialist welding, heat treatment and mechanical works. It also manufactures food grade stainless steel gallery equipment and undertakes outfitting of ships such as accommodation, soft furnishings and refrigeration, particularly in the cruise sector. It experienced dramatic growth and expansion over the past ten years, with a turnover increase in excess of 60% in the last five years alone.

Harris Pye has major experience with FPSO and FSO conversions. It has been involved in more than 45% of the world's FPSO's ever converted or newbuilt, and has had key inputs to the development of safe use of dual fuel for boilers and the safe and practical application and installation of boilers on board these vessels.

Harris Pye Singapore has invested significantly in fining machine extensions and upgrades at its manufacturing plant located in Gul Street 4. This has facilitated its ability to serve global markets in the power, oil and gas, petrochemical and



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marine industries, as well as being able to respond quickly to emergency failures of exhaust gas boilers and economisers.

Harris Pye Singapore has been awarded certificates of authorisation from the American Society of Mechanical Engineers (ASME) and the National Board of Boiler & Pressure Vessel Inspectors for the use of the 'S', 'U' and 'R' stamps to each of our production facilities. The company joined ASMI as Associate Member in 2009.

One of Harris Pye Singapore's strengths lie in its ability to offer turnkey solutions and complete systems to its customers. "This turnkey option has real appeal to clients such as SBM, MODEC & Saipem," says Managing Director John Kinman. "There are only a limited number of companies which can offer this technology and equipment to the market, let alone offer the turnkey possibility." Indeed, as a well-established player in the marine, offshore oil & gas and onshore industrial sector, Harris Pye Singapore will enjoy a competitive advantage over others.



Harris Pye Singapore has carried out many repairs on FPSO Serpentina, from boiler retubing to heavy fuel oil modifications. (Photo courtesy of SBM)

In February 2012, Harris Pye secured its first order for the design, supply, installation and commissioning of its own complete boiler system for SBM. The project involves converting two existing MHI roof-fired boilers from normal HFO (Heavy Fuel Oil) burning to Dual Fuel; including full re-tubing and Dual Fuel (Field Gas & MDO) conversion equipment. Harris Pye will also supply, install and commission the Automatic Combustion Control (ACC) and Burner Management System (BMS), as well as skids for Field Gas, MDO and Atomizing steam.

Between 2001 and 2011, Harris Pye Singapore has undertaken many works on FPSO Brazil, including SPS overlay, boiler surveys and repairs. (Photo courtesy of SBM)

ECOSPEC GLOBAL TECHNOLOGY – MOVING TOWARDS A SUSTAINABLE FUTURE

Singapore-based research and development technological company, Ecospec Global Technology Pte Ltd (Ecospec), offers solutions to better the environment. Founded in 2001, Ecospec has since established itself as a market leader in advance emission reduction and environmental technologies. The enterprising company offers a range of chemical free and innovative products in the areas of emission abatement systems, water treatment systems, corrosion control systems and other environmental technologies which will be in huge demand in view of future shipping regulatory requirements.

Ecospec has gained worldwide recognition in its revolutionary CSNOx technology. This technology has obtained the prestigious "Technology of the Year" global award at the Green Ship Technology Conference 2010 in Copenhagen, and the "Environment Protection Award" at the Seatrade Asia Awards 2009 for its excellence and innovation in the Asian region.



The Ecospec team on board "MT White Sea" during CSNOx installation on the vessel.

an ultra-low frequency electronic boiler water treatment system.

CSNOx - Emission Control System

CSNOx is the world's first emission abatement system to remove Sulphur Dioxide (SO_x), Carbon Dioxide (CO₂) and Nitrogen Oxides (NO_x) in a single process by employing the Ultra Low Frequency (ULF) wave. CSNOx system has developed from an open loop system to a closed loop system with no wash water discharge. With the latest developments, a hybrid CSNOx system can now be offered to meet the demands of shipowners.

BioMag - Bio-Fouling Control System

BioMag is a chemical free system which uses ULF to excite the surfaces. These surfaces will then act as a 'hot surfaces', preventing organisms from anchoring. BioMag is applied in cooling water systems, ship hulls and used in onshore industries.

EIMag - Corrosion Control System

EIMag, a corrosion control system, can be used in fresh water or sea water of submerged structures such as steel piles. With Ecospec's patented ULF wave, corrosion control is achieved through the wave exciting the steel to produce a protective magnetite coating on its surface. This magnetite layer formed has the unique "self-repairing" coating property. Such magnetite coating is formed by the excitation property of ULF wave without high pressure or

temperature and the layer is formed again when it is exposed.

ScaMag - Boiler Water Treatment System

ScaMag ULF electronics boiler water treatment system energises boiler feedwater before it goes into the boiler. Energy is transferred into the water, forming a hard scale "calcite" on heat exchange surface and is mass precipitated out in bulk water as very fine powder form called "Aragonite". This fine powder can be carried away by water and flushed off from the boiler. Besides being used in boiler water treatment systems, ScaMag is also applied in the food industry and power plants.

Ecospec joined ASMI as Associate Member in 2011. In March 2012, Sembawang Shipyard invested 20% equity interest in Ecospec to co-develop green products and services to meet maritime and governmental regulatory requirements of the marine and offshore industries.

Ecospec has also signed technology agreements with a number of shipowners and other companies. These included the Royal Caribbean Cruises Ltd, Canada Steamship Lines, STX Heavy Industries Co., Ltd, Dutch shipping company ForestWave Navigation and AE&E Lentjes GmbH, to supply and install its CSNOx technology and systems to these companies.



A CSNOx Tower.

With a mission to provide a sustainable environment, Ecospec had invented systems which benefit the environment for current and future generations. It has several patents including CSNOx, the world's first 3-in-1 emission abatement technology, BioMag, a bio-fouling control system, EIMag, a corrosion control system, and ScaMag