

Reconditioning of 4-stroke Engine Liners and Piston Crowns



Brigantine has long been renowned as one of the best 2-stroke engine parts reconditioning workshops in the world, and strives for on time delivery and outstanding quality in all our reconditioning works. Brigantine Marine Services has decided to enhance our capability in the reconditioning of 4-stroke engine parts. Based on our experience and current facilities on 2-stroke reconditioning, this is an obvious extension of our service portfolio.

To date Brigantine has successfully reconditioned MAK M552, MAK453 and MAN L28/32 crowns. As an authorized repairer for mainstream engine manufacturers, Brigantine is prepared to recondition all makes and models of crowns from MAN, MAK, etc.

Ring groove wear is the most common defect on piston crowns. For such reconditioning, we carry out hard chrome plating to restore the finish dimensions. The challenge of this job is the narrowness of the ring grooves. The ring grooves' width is down to 10mm whereas 2-stroke crown ring grooves' width is much larger.



This challenge has been addressed by fabricating new thinner anodes as well as changing the grinding process. Brigantine has worked with Chris Marine for suitable grinding wheels, and our existing grinding machines have been modified to grind thinner grooves. In addition, thanks to Mr. Eric Svenson, our visiting Plating Consultant, for his advice on using stiffer lead alloy to fabricate the anodes.

Brigantine is also honing 4-stroke liners with the purchase of new Chris Marine honing rig together with our modified honing facility. We are now able to tackle reconditioning of 840 mm-980mm bore engines and also those for 210 mm-290 mm bore engines. Currently, we are working to expand our capability to cover the reconditioning of the mid range bore engines also.

Welcome!

This month is our fifth themed newsletter focusing on Marine Services.

Each month offers a snap shot into different aspects of Brigantine's various business activities.

This edition focuses on additional support to naval vessels and 4-stroke engine liners and piston crowns.

We thank you, our valued customer and business partner, for your on going support.

Yours faithfully,

John Brennan
Managing Director

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Provision of Husbanding Services to New Zealand Navy

From April 30 to May 3, 2009 Brigantine made our debut in providing military husbanding services to New Zealand Navy (HMNZS TE MANA and HMNZS ENDEAVOUR). Brigantine leveraged our considerable resources to provide a wide range of port services to include water taxis, breasting and fendering barges, land transportation as well as purchasing services for a reception held onboard HMNZS TE MANA. No detail was too small, even down to a finding and providing a last minute request for plants to provide on board greenery for the reception's backdrop.



HMNZS TE MANA (A frigate with a crew of 118)



HMNZS ENDEAVOUR (An oiler & supply ship with a crew of 59)

Brigantine provided outstanding support after competitively bidding and winning these requirements against local shipping agents and ship chandlers such as PDLToll, Wallem and ISS-Inchcape. This is only the first step in Brigantine competitively bidding and winning regional contracts for the provision of supplies and services to the Navies of the world.

There is high level of dedication by all parties involved throughout the whole execution process from April 30 to May 3. Prior to the service and product delivery on April 30, all supplies and equipment at our Yuen Long warehouse were verified and again inventoried before delivering to the Navy. All water taxis were inspected in accordance with the US Navy Seventh Fleet Water Taxi Inspection checklist. To ensure a hassle free port stay, even the water taxi routes were rehearsed prior to arrival to confirm that the water taxi schedules were accurate.



(Site visit – water taxi)

The whole task was completed on May 3 with the on schedule disconnection of the ship's breasting barge. This evolution provided invaluable experience for the planned expansion of business with the US Navy in late 2009.



(Officers supervise services provided)



(Satisfied Customers)