



Marine paints and coatings

what effect will the shipping downturn have on this sector?

Michael King

The potential rewards available to paints and coating manufacturers targeting the bulk carrier sector in the coming years have become rather difficult to calculate since last summer when the rates crash sent shipping supply and demand forecasts haywire.

On the newbuilding side, while some vessel orders have already been cancelled and more will surely follow there remains an avalanche of deliveries outstanding covering the 2008–2011 period which should keep paint demand from the bulk sector buoyant. But the current dearth of orders will almost certainly see newbuilding coatings demand dry up thereafter, pushing suppliers to put more effort into products geared at repair and maintenance markets and longevity, rather than those that speed up vessels and reduce bunker costs.

The bulk carrier shipping collapse has, of course, prompted most aspects of the industry to try and rein in costs. Given that paints suppliers have been complaining about the huge inflation of many input minerals and oil in recent years as they sought to nudge up prices it is no surprise that, with commodity prices falling, customers are now expectantly waiting for the cost of coatings to follow in their wake.

Martin Kent, technical director of Bibby Ship Management, said ship managers were expecting lower prices to reflect any savings on production costs of coatings. "I think it will take time for the process to stabilize," he added. "The market deals in advance purchases so there may be some time before we see the results of the downturn and prices of lubes and paints

beginning to fall."

Rob Taylor, market manager for Bulk Carriers at International Paint Ltd and one of the few coatings managers willing to put his head above the parapet and discuss industry wide issues, said that although the cost of marine paint was affected by commodity prices such as crude oil and copper, because these materials were not purchased directly from the commodity spot

*Martin Kent,
technical director of
Bibby Ship
Management.*



markets but as a broad range of processed materials downstream from that market, falling spot prices would take time to filter through.

“Even then it will only impact a proportion of the overall costs,” he said. “We know that customers expect reliable and consistent pricing, without dramatic price swings. This means that we must take a balanced and long-term view of any cost movements in order to provide customers with sustainably competitive prices.”

Taylor said a shipping downturn would not necessarily change the outlook of bulker owners and managers to paints. “In my opinion bulk carriers are generally viewed as the workhorses of the industry and value for money has always been a key consideration,” he said. “Protecting the cargo holds from abrasion and subsequent corrosion, however, are important requirements of marine coatings and operators will invest to protect the revenue earning area of the vessel, minimize steelwork replacement and protect vessel integrity.

“The choice of high-performance coatings in these areas is therefore less price sensitive than for example the choice of cosmetic finishes.”

Rob Grool, group managing director of Hong Kong’s Wallem Group, said coatings were quite often a matter of individual taste for ship owners irrespective of the rival claims of suppliers regarding the benefits of their products.

“I am sure that most, if not all, claims by paint manufacturers are correct, as long as they are applied under laboratory conditions and for the intended use and climatic conditions,” he explained. “Ships, however, have the very un-accommodating habit of being damaged, painted under less than ideal circumstances and subject to climatic, water and sunlight conditions no paint manufacturer thought of.”

Taylor was bullish about the market outlook for bulk carriers, seeing positives were many can only find negatives. “The

Rob Taylor, market manager for Bulk Carriers at International Paint.



First PSPC-compliant bulkers enter service

The first wave of bulk carriers compliant with the International Maritime Organization’s new Performance Standards for Protective Coatings (PSPC) are now entering service.

The regulation applies to vessels contracted after 1 July 2008; or, in the absence of a building contract, the keels of which were laid after 1 January 2009; or to vessels due to be delivered after 1 July 2012.

The PSPC and the type approval certification process places new responsibilities on coatings manufacturers and their clients to ensure all coatings designed for use in double side skin spaces of bulk carriers and dedicated sea water ballast tanks in all types of ships meet strict performance requirements including, for example, guarantees on coating production techniques and performance.

Lloyd’s Register is one of a number of classification societies currently offering PCPC services. In December last year LR helped Korean builder DSME deliver its first PSPC-compliant ship — a Capesize bulk carrier called the *Marioula* — to Chandris.

industry fundamentals for growth remain,” he said.

“Infrastructure demand is a critical driver and there are a number of government-backed packages to stimulate further developments in a number of emerging economies, not least of course China. This will form the backbone of the recovery in the sector.

“Longer term, energy demands for coal also remain robust according to US energy statistics and will continue to require waterborne transportation between producing and consuming locations.

“Whilst the bulker orderbook remains huge, there will be more cancellations to follow, which will help to balance supply and demand going forwards. That said, 2009, 2010 and 2011 will be peak years for bulker newbuilding deliveries.”

With many ships being put into ‘hot’ or ‘cold’ lay-up, responsible owners would take the opportunity to embark on extensive maintenance programmes including coating overhauls away from the pressures of constant operation. “For example,” said Taylor, “if the ballast tanks are to be emptied, the application of Interbond 808 which is both surface and moisture tolerant and contains aluminium to give long term anticorrosive performance, can play an important role in a planned maintenance programme.”

Owners of vessels in cold lay-up would need to consider the effect of fouling on the underwater hull antifouling and, for extended lay-up, plan for an underwater clean before the vessel returns to service. “An important factor is to avoid damage of the antifouling system by using a professional underwater cleaning company,” said Taylor. “The consequences of getting it wrong can be expensive and can result in increased hull roughness as well as providing an attractive site for future fouling growth.”

Growth in demand in Asia drives demand for marine paints

An annual demand growth of 8.5% in Asia should lead to marine paints use of 1.078mt (million tonnes) by 2012, writes *Kunal Bose in Calcutta*. Even while the forecast was made before the world got enveloped in unprecedented economic turmoil leading to cancellation of quite a few orders for ships, the marine paints market will remain mostly concentrated in the Asia-Pacific region. The 2012 demand target could be missed, but the region may well see its present three-fourth share of the global marine paints use improve. The reason is that shipyards in the West specializing in building cruise ships and yachts have leaner order book positions than the yards in Asian countries.

According to a research report, the Indian marine coating market is growing at a "sector-leading 25% a year," that is more than double the rate of Saudi Arabia's 12%. India and Saudi Arabia will continue to vie for larger stakes in the new build and ship repairing sectors, respectively. As this happens, some more leading global paints manufacturers will be creating manufacturing base in India either independently or in alliances with local companies.

Akzo Nobel Coatings India is this country's leading producer of marine and protective coatings calling for employment of high technology. Like Akzo, Nippon Paint is doing business in India without a partner. However, Chugoku of Japan, a leading producer of marine paints, is producing paints here in partnership with Jenson & Nicholson.

Shipbuilders and repairers based here are required to use high quality paints in response to their customers' need to conform to standards given by International Maritime Organization. India has not as yet ratified the anti-fouling systems on ships convention banning the use of anti-fouling compound tributyltin (TBT) from September 2008. But in case the outer surface of ship hulls built or repaired here are not given coatings of non-TBT paints then such vessels will not be able to take to international waters in Europe, the US and many other places where the ban has come in force.

TBT gained popularity in 1970s as it was found effective in keeping barnacles, seaweed and other organisms from sticking to vessels, slowing down their speed and leading to higher fuel consumption. But what became a cause of concern for the United Nations and environmentalists was that the release of copper toxicants in waters as ships travel are harming marine life.

The fact remains that migration to alternative foul release coatings like Interleek 900 made by Akzo Nobel calls for considerable investment in R&D. Only that portion of the Indian paints industry where foreign groups are present has the know-how to make new generation anti-fouling paints. But since they do not have enough capacity here to meet the local demand for paints from shipyards and offshore oil platforms, India remains a big importer of anti-fouling marine paints from Europe (particularly the Netherlands) and Japan.



A research report says, the "Indian marine paint sector has some way to go to reach its full potential. Major multinational paint makers will remain the winners as smaller Indian paint companies will not be able to compete with them on technological or stocking grounds." While high value, high-tech marine paints will remain the domain of foreign suppliers, the playing field for Indian paint makers will be cargo vessels plying inland routes, fishing trawlers and steamers for ferrying passengers over short distances on river routes. Market reports indicate that the bigger Indian paint manufacturers having mastered the art of making coatings for domestic, automobile and engineering applications but not ready to make large investments in R&D are looking for overseas partners to enter the marine paints market.

Industry officials say foreign companies may not be too keen to join hands with Indian paints manufacturers mainly for two reasons. First, rules relating to foreign direct investment have become so liberal that hand holding to create a manufacturing base here has become a dispensable service. Moreover, marine paints being a niche market and foreign groups having already known the local buyers well through exports they may not be wrong in thinking they could manage operation here without marketing support from Indian parties.

Bereft of technology, what the Indian industry should be doing is to expand capacity for making alkyd resin, chlorinated rubber and epoxy resin based paints finding application in parts of vessels but external bottom sides. There is no running away from the fact that vessel surfaces exposed to seawater will require application of imported paints or the ones made by Akzo here. The rest of the vessel is exposed to saline in the air and also get wet by seawater. For those portions of ships, Indian paints are found to be alright.

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International Paint's coatings win popularity in the marine market

International Paints is a major player in the marine paints and coatings market.

Recently, the group's German arm IP Germany (International Farbenwerke GmbH) was named 'Shipbuilding Partner of the Year 2008' by Meyer Werft Papenburg.

This is the third year running that Meyer Werft has awarded the 'Partner des Jahres' prize to its top suppliers. The award is part of the shipyard's supplier management initiative which continually assesses the performance of suppliers and rates



them accordingly. The award, which also includes the categories mechanical engineering, outfitting, interiors and innovation was based on the results of supplier ratings during the construction of the cruise vessels *Celebrity Solstice* — the largest cruise vessel ever built by Meyer Werft, the *AIDAbella* and the passenger ship/container carrier *Gunung Dempo*.

Attending the ceremony held at Meyer Werft on 24 January, Andrew Rayner, Marine Manager, International Farbenwerke GmbH said, "We are very proud and honoured to receive this award. Since 1999 International Farbenwerke has been continuously supplying marine coatings to Meyer Werft. During this time our partnership with Meyer Werft has continued to develop and we have jointly introduced a number of coating innovations to meet the changing requirements of cruise vessel construction and operation. Through regular meetings involving key Meyer Werft personnel and our own local and central International Paint teams, we have been working to drive improvement in all areas of new vessel construction. This award is a great example of what can be achieved through close cooperation between customer and supplier and teamwork within our own organization."

At the awards ceremony, Hans Thieke, Meyer Werft Senior Purchaser made reference to the contribution made by International Farbenwerke GmbH through coatings which have helped reduce shipyard VOC's (volatile organic compounds), improved operator fuel efficiency through advanced foul release technology and reduced operator maintenance costs through high performance coatings for external vessel areas.

International Farbenwerke is currently supplying coatings for five Meyer Werft newbuildings, including the *AIDAluna*, *AIDAblu*, *Celebrity Equinox* and *Celebrity Eclipse*.

€100K INTERSLEEK SAVINGS DRIVES GNV FLEET CONVERSION
Grandi Navi Veloci (GNV), one of the leading cruise ferries

operators in the Mediterranean has converted all vessels at maintenance and repair dry docking to the biocide-free, foul release system, Intersleek.

The conversion process began in 2005 with the application of Intersleek 700, a silicone based foul release system, on the 32,700 GT, 23 knot cruise ferry *Majestic*.

Since that time, another four of the company's vessels, the *Fantastic*, *Splendid*, *Excellent* and *Excelsior* have all been coated with Intersleek 700.

In January 2009, after 40 months service in one of the world's most severe fouling environments, the *Majestic* drydocked in Ente Bacini Shipyard, Genoa. The hull was described as being in excellent condition, smooth, glossy and with minimal mechanical damage. In fact only 30 litres of Intersleek was required for touch-up on the bow before the vessel returned to service.

Bruno Dionisi, GNV Technical Consultant, commenting on the performance of Intersleek on the *Majestic* said, "On average this product provides undisputed advantages which, in our case, are represented by a bunker saving of around 6–7%, a significant reduction in time spent in dry dock and hull washing costs and, most of all, an overall saving on the complete economic paint scheme which can be evaluated at around €100,000."

Even before the *Majestic* returned to drydock, proven fleet fuel savings had already influenced GNV's decision to further maximize operational benefit and upgrade from Intersleek 700 by coating a further two vessels in the fleet, the *La Superba* and *La Suprema*, with Intersleek 900, the fluoropolymer-based system offering the very latest advances in foul release technology. The *La Superba*, completed in March 2007 is the largest cruise ferry in the world and was the first vessel in Italy to be coated with Intersleek 900.

Smoother, tougher and with better foul release capabilities than its silicone based predecessor, Intersleek 900 has now been applied on over 50 passenger vessels worldwide.