

Coating reform is spreading to new areas

The industry is becoming used to applying the Performance Standards for Protective Coatings to dedicated ballast tanks, but bureaucratic, inspection and regulatory challenges remain

The Performance Standards for Protective Coatings (PSPC) came into effect for tankers built to IACS's Common Structural Rules (CSR) on 8 December 2006 and for all newbuildings not less than 500gt contracted from 1 July 2008. The requirements provide detailed specifications for coating system approval intended to provide a target useful life of 15 years in 'good' condition. A detailed history of the coating must be kept on board in a Coating Technical File.

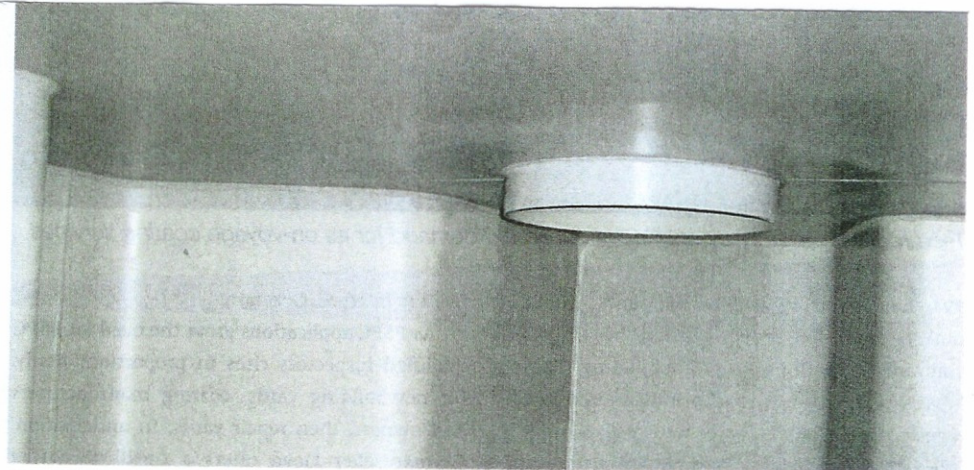
Bjarne Jansen, surveyor at DNV's Maritime Technology & Production Centre in Norway, believes that the strict requirements for preparation ahead of paint application means there is a good chance of achieving the 15 year target. "Many yards will be able to comply with the new regulations without major change; the biggest challenge is likely to be complying with the new documentation standards, rather than fixing a dust or salt problem on the spot. Much more reporting will be required."

That said, yards cannot afford to be blasé. Without careful control, coating film thicknesses three or four times greater than specified can result on the complex structures inside ballast tanks. This can lead to cracking, detachment and corrosion, even before a vessel enters service. Rapid block turnaround in shipyards can lead to over-application as rejection due to a low coating dry film thickness (DFT) would impact productivity.

The new standards require paint suppliers to specify maximum DFT values, and International Paint (IP) has developed a ballast tank cycling test to assess the performance of coatings applied at high DFT. In this, girders are coated to four times the specified dry film thickness and tested under hot/dry and cold/wet cyclic conditions. IP claims its Intershield 300 epoxy system, which has been used on over 5,600 vessels over the last 20 years, is tolerant to low or high DFT, with excellent resistance to cracking.

As an example of a new project, Intershield 300 and IP's phenolic epoxy tank coating, Interline

994, have been applied to two new product tankers built for Brovigs Rederi by Chinese shipyard China Dong Fang Shipbuilding. These vessels represent a first step into international shipbuilding for the yard and will now be followed by a further seven chemical tankers using IP coatings: two for Marnavi, Italy, and five for Intersee, Germany.



Gleaming reference: IP's phenolic epoxy tank coating is finding favour in China