
Intelligent Anti-corrosion and Anti-fouling Coating Technology

Jingjing Wang

*Xiamen Advanced Materials Academy of Luoyang Ship Material Research Institute,
Xiamen 361116, China*

Abstract

As the navigation area of ships becomes wider and the requirements for long-term use and functionality become higher, traditional anti-corrosion and anti-fouling coatings are unable to meet the future development needs of ships. This lecture will focus on the long-term anti-fouling needs of oceangoing vessels and the anti-cavitation corrosion needs of ship propellers. It will introduce the research progress of temperature-sensitive intelligent anti-fouling coatings, high-strength targeted self-healing anti-cavitation anti-corrosion coatings, and other intelligent anti-corrosion and anti-fouling technologies from the aspects of coating function design, resin structure design, formula design, and actual sea evaluation. It will explore the development direction of future anti-corrosion and anti-fouling coatings and provide reference for the design of anti-corrosion and anti-fouling schemes for future ships.