

石油磺酸钡对微波吸收涂层的耐腐蚀性能的影响

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Effects of Barium Petroleum Sulfonate on Corrosion Resistance of Microwave Absorbing Coating

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摘要 为提高羰基铁粉微波吸收涂料的耐腐蚀性能,在微波吸收涂料配方中加入缓蚀剂石油磺酸钡。利用中性盐雾实验方法研究石油磺酸钡加入量对涂层抗盐雾性能的影响,分析石油磺酸钡对提高涂层耐盐雾性能的防腐机理,考察石油磺酸钡加入量对涂层力学性能以及微波吸收性能的影响。结果表明,当石油磺酸钡加入量为4.2%(质量分数)时,所制备的涂层的抗盐雾性能有明显提高,在涂层被腐蚀面积为0.1%~0.25%,外观评级为八级时,涂层的盐雾暴露时间达到210h,涂层附着力为4.3MPa,同时涂层的宽频微波吸收性能基本不变。

关键词 : [石油磺酸钡](#), [微波吸收涂料](#), [缓蚀剂](#), [抗盐雾性能](#)

Abstract: To improve corrosion resistance of the microwave absorbing coating filled with carbonyl iron powder, barium petroleum sulfonate (BPS), a kind of corrosive inhibitor, was added into the coating. The effect of mass percent of BPS on the capability of the corrosion resistance of the coating was studied using the neutral salt spray box, and the mechanism of corrosion resistance of BPS was analyzed. The effect of mass percent of BPS on mechanical strength and wave absorbing of coating were also discussed. When 4.2% (mass percent) of BPS was added into the coating, the capability of corrosion resistance of the coating was improved obviously. The surface of the coating becomes eighth grade (0.1%-0.25% of surface corroded) after 210h of being exposed in the salt spray box. The tensile strength of the coating was 4.3 MPa, and the reflectivity of the coating almost has no change.

Key words : [barium petroleum sulfonate](#) [microwave absorbing coating](#) [corrosion inhibitor](#) [salt spray resistance](#)

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