

## 해수 내 열용사코팅의 캐비테이션 손상 특성

## Characteristics of cavitation damage on thermal spray coating in seawater

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The large and high-speed vessels has been greatly advanced, but ship materials have been caused the problem such as corrosion, cavitation and erosion. Cavitation and erosion corrosion is due to repeating action of cavitation pulse such as generation and collapse of bubbles[1]. Micro-jet and acoustic wave for material are called cavitation pulses due to their very high pressure, short duration and small area of activity[2]. Cavitation can produce material damage in hydraulic machines, such as pumps, turbines, valves and ship propellers[3]. To solve these problems, the cavitation and electrochemical characteristics for thermal spray coating and the sealing is executed to get the excellent electrochemical and anti-cavitation characteristics in sea water environment[4-5].

In this study, cavitation erosion was measured on 85%Al-14%Zn-1%Zr thermal spray coating and it's sealing in sea water with the condition of vibration prequency of 20Khz and amplitude of 10 $\mu$ m, according to ASTM-G32. The electrochemical apparatus consisted of a Pt coil as the counter electrode and Ag/AgCl(saturated KCl) reference electrode.