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PEO처리된 마그네슘의 산화층 표면에서 전해액의 영향
Influence of electrolytes on oxidation layer of Mg treated by PEO process

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Mg and Mg alloys have been used for lots of applications due to low density recently. However, Mg and Mg alloys have a restricted application because of poor corrosion properties. Thus, surface treatment which protect the substrate from corrosion environment are required. Plasma electrolytic oxidation(PEO) process which improves corrosion properties of Mg is environmental friendly surface coating technology. PEO process combines electrochemical oxidation with a high voltage spark treatment. In this study, to investigate the Influence of electrolytes on oxide layer of Mg treated by PEO process, pure Mg and Mg Alloys(AZ31, AZ91) were treated in two kinds of electrolyte : Sodium Silicate, Sodium Aluminate. And then the formed oxide layers were compared each other. The morphology was observed using SEM. The phase and chemical composition of the oxide layer was analyzed by XRD and EDS. The corrosion test in 5% NaCl solution was carried out for the analysis of corrosion properties of specimens