산화바나듐(Ⅴ)에 의한 철 및 니켈의 산화특성

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(1977. 11. 17 接受)

Oxidation Charateristics of Iron and Nickel by Vanadium (Ⅴ) Oxide.

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(Received, Nov. 17, 1977)

ABSTRACT

The reactions of iron or nickel with vanadium (Ⅴ) oxide in argon gas atmosphere were studied in the temperature range of 650-1000°C for various times.

The corrosion products of the reactions were examined by X-ray diffraction paterns,

Iron (Ⅱ) vanadate (Ⅲ) and wüstite were detected in iron-vanadium (Ⅴ) oxide reaction. These corrosion products were formed rapidly and were detected identically in the above temperature range. The weight loss was detected in iron-vanadium (Ⅴ) oxide reaction but none in nickel-vanadium (Ⅴ) oxide reaction, The weight loss was considered to be due to the evolution of oxygen. A role of vanadium (Ⅴ) oxide in the accelerated corrosion of the metals was considered as oxygen carrier.

알루미늄 陽極溶出에 關한 硏究(Ⅱ)

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A Study on the Anodic Dissolution of Aluminum (II)

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ABSTRACT

In many cases oxide films formed on metals in atmosphere or aqueous solution are chemically inactive, especially it is the case with aluminum. In this study, anodic dissolution of aluminum was done using various electrolyte and cathode, mechanism of which was examined.

As a consquence, oxide film on aluminum surface was dissolved together with the dissolution reaction of metal by the anodic current. It was shown that the dissolution reaction due to the contact between electrolyte and metal happened in the same time.