

GALVANIC CORROSION OF ALUMINIUM-BASE ALLOY  
IN METHANOL-HCl

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IN METHANOL-HCl**

**By**

**TEOH CHOON PING**

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**GALVANIC CORROSION OF ALUMINIUM BASED ALLOY IN  
THE PRESENT OF METHANOL-HCl**

By

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## ABSTRAK

Tujuan kertas kerja ini adalah untuk mempelajari sifat elektrokimia bagi aloi aluminium dalam larutan methanol-HCl. Dalam kertas kerja ini mengandungi dua ujikaji yang akan dijalankan iaitu ujian kerendaman aluminium dalam kepekatan methanol-HCl yang berbeza dan ujian aluminium disalurkan dengan kepekatan methanol-HCl yang berbeza di bawah suhu yang berbeza. Dalam penyelidikan semua larutan, logam tersebut (aluminium) telah menunjukkan reaksi aktif dengan peningkatan kepekatan larutan tersebut. Walau bagaimanapun, apabila logam ujian diuji di bawah suhu yang berbeza ia telah menunjukkan satu kadar penghakisan yang tidak stabil. Air suling dan methnol tulin dijadikan sebagai kawalan kepada larutan ion klorida pada kepekatan yang rendah. Secara keseluruhannya, asid hidroklorik (HCl) telah menunjukkan kesannya sebagai perosak kepada lapisan perlindungan aluminium dan menyebabkan peningkatan kadar penghakisan.

## ABSTRACT

The aim of the present work is the study of electrochemical behaviour of aluminium based alloy in methanol-HCl solutions. There are two experiment will be carry out that is immersing aluminium in different concentration of methanol-HCl solution and aluminium coated with different concentration of methanol-HCl under different temperature. In all solutions investigated, the metal (aluminium) exhibited an active reaction with the increased of the concentration of the solution. However when the metal was testing under various temperature it represent an unstable corrosion rate. Distilled water and pure methanol appears as a control to the solution chloride at low concentration. Overall, the hydrochloride acid (HCl) exhibited the deleterious effect for the protectivity of aluminium and causes high corrosion rate.

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