

EFFECT OF CHLORIDE SALTS ON THE
OXIDATION BEHAVIOR
OF ALUMINIUM

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FACULTY SCIENCE AND TECHNOLOGY
UNIVERSITI PUTRA MALAYSIA TERENGGANU
(UNIVERSITY COLLEGE TERENGGANU)
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TESIS

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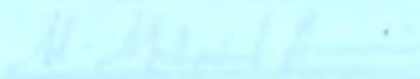
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EFFECT OF CHLORIDE SALTS ON THE OXIDATION BEHAVIOR OF ALUMINIUM

Approved by

Supervisor

BY


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Date: 13.06.2020

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Thesis Submitted in fulfillment of the Requirements for the
Bachelor Science of Chemistry

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Date: _____

Faculty Science and Technology
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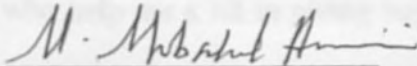
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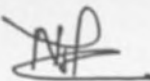
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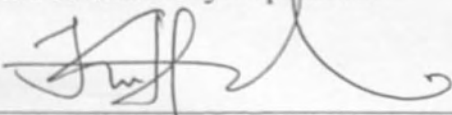
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ABSTRAK

Dengan kehadiran sejenis bahan elektrolitik bertaburan atas permukaan suatu logam atau aloi akan mencetuskan suatu keadaan dikenali pengaratan. Alkali atau alkali logam adalah lebih cenderung untuk tindak balas ini. Logam Aluminium kebanyakannya digunakan untuk pembinaan dan lain kerana ia adalah ringan dan tahan kepada pengaratan.

The low temperature corrosion behavior of Aluminium has been investigated in

Ciri-ciri pengoksidaan pada suhu rendah bagi Aluminium telah dikaji dengan kehadiran air laut, $MgCl_2$, $BaCl_2$, dan $BaCl_2$ pada suhu antara 80 hingga 200 °C dalam udara biasa. Morfologi bagi sampel dikaji dalam pemeriksaan macroskopik. Ini akan menunjukkan sampel karat dalam nisbah yang berlainan dengan kehadiran garam alkali logam.

ABSTRACT
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The presence of an electrolytic deposit on a metal or alloy surface may bring about an accelerated environmental attack known as corrosion. Alkali or alkaline earth metal salts are capable to propagate this attack. Aluminium metal is used extensively in building and others due to its light weight and corrosion resistant materials.

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LIST OF TABLES

The low temperature oxidation behavior of Aluminium has been investigated in presence of seawater, MgCl₂, BaCl₂ and CaCl₂ at temperature 80 to 200 °C in the open air. The morphologies of samples were examined on the basis of macroscopic examination. It has been shown that samples corrode at a different rate in presence of alkaline earth metal salts.

1.0 ALUMINIUM

- 1.0.1 General
- 1.0.2 Properties
- 1.0.3 Derivation
- 1.0.4 Forms Available
- 1.0.5 Uses
- 1.0.6 Uses
- 1.0.7 Aluminium Alloy

1.1 CORROSION

- 1.1.1 General
- 1.1.2 Type of corrosion
- 1.1.3 Factors in Corrosion

1.2 CORROSION RESISTANCE