

**STUDY ON METAL COMPONENTS EXPOSED TO THE
SEWERAGE ENVIRONMENT**

By

YUSMAZURA BINTI AYOB

2004217924

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DECLARATION

I Yusmazura binti Ayob, 2004217924, confirm that the work is my own and that appropriate credit has been given where references has been made to the work of others.

Signature:

Date:

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ABSTRACT

Many new materials have been developed and proven to perform when subjected to corrosive environment in sewer facilities. However observations in Malaysia have shown that these materials deteriorate at a much faster rate compared to those observed in other countries. Sewerage environment is known to be very corrosive, causing corrosion; making operations and maintenance more costly as replacement of materials are needed. Corrosion is the destructive result of chemical reaction between a metal or metal alloy and its environment. Maintenance activities carried out to replace these materials cause disruption in services. Results from this study have shown that the effect of the corrosion reduces the density, hardness, ultimate tensile strength, and Yield strength of the material. The presence of hydrogen sulphide is the most important factor causing corrosion of metals in sewerage systems.

Key words: Corrosion, sewer facilities, sewerage environment, ultimate tensile strength, hydrogen sulphide, deteriorate

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