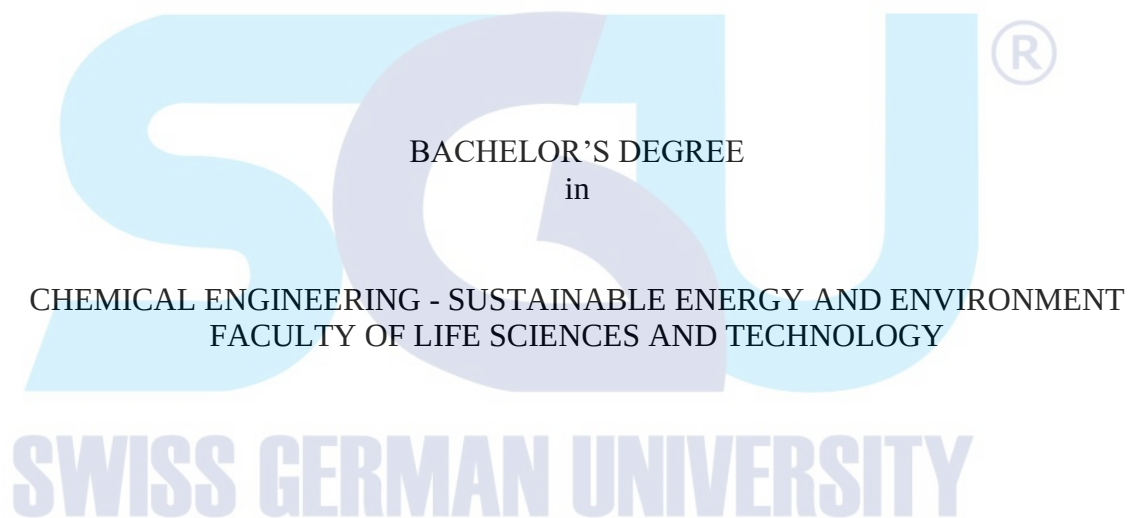


**PRODUCTION PROCESS DEVELOPMENT OF EQUIPMENT CORROSION
COATING CONTAINING WATER HYACINTH (*Eichhornia Crassipes*)
EXTRACT**

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

PRODUCTION PROCESS DEVELOPMENT OF EQUIPMENT CORROSION COATING CONTAINING WATER HYACINTH (Eichhornia Crassipes) EXTRACT

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Water hyacinth (*Eichhornia Crassipes*) is an invasive aquatic plant of which extract has the potential to be applied as corrosion coating. This research is conducted to develop a production process of equipment corrosion coating containing water hyacinth extract by means of literature review. Corrosion coating containing water hyacinth extract, specifically from its leaf, can be produced by mixing with Gum Arabic, WW Rosin, CaCO_3 , and ZnO ; for liquid coating MIBK is used as solvent. Each kg of fresh WHL feed yields 6.46 L and 0.52 kg of liquid and powder corrosion coating with TPC values of 0.74 g GAE/L liquid coating and 4.16 g GAE/kg powder coating. Thermal energy demand for each gram of fresh WHL feed are 12,034.42 J for liquid coating and 13,877.05 J for powder coating. Simultaneous non-ideal process results in loss of around 40% for TPC in extract and the amount of coating produced.

Keywords: *Eichhornia crassipes*, equipment coating, green corrosion coating, process development.



DEDICATION

This work is dedicated to myself, to my family who never failed to show their support, and to the lecturers in the university –especially my advisor and co-advisor– for their guidance throughout my time in university.



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