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FACULTY OF INDUSTRIAL ENGINEERING

DEPARTMENT OF TEXTILE TECHNOLOGY

*FINDING CONVERSION FACTORS FOR LABORATORY TO BULK
REPRODUCIBILITY IN CONTINUOUS DYEING OF COTTON FABRICS
WITH REACTIVE AND VAT DYES*

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DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR :

B. Eng HONOURS IN TEXTILE TECHNOLOGY

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ABSTRACT

This project is based on research and experiment done by the student in the dyehouse at David Whitehead Textiles Fabric division (Chegutu), during the Industrial Attachment period. It was observed that there were serious incompatibilities between the shades produced in the laboratory and those of bulk production using the same recipe. As a result, too much time and resources were spent trying to correct the recipe during bulk production. Upon some investigations, it was discovered that the causes were more systematic and had to do with processing consistency. However, there was one inherent problem, which also contributed to reproducibility problems, the laboratory and bulk machine differences, and it prompted this project. It was discovered that if the systematic differences relating to human error and processing consistency were taken care of, then a conversion factor could be found cater for reactive and vat dyes which would cater for the machine difference and reduce, or even eliminate problems of lab to bulk reproducibility.