

**DESIGN AND DEVELOPMENT OF A MECHANISM TO
IMPROVE PRODUCTIVITY IN BUGLE BEAD
ATTACHING IN APPAREL INDUSTRY**

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M.Eng/PG Diploma in Manufacturing Systems Engineering
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Department of Mechanical Engineering

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Science in Manufacturing Systems Engineering

Department of Mechanical Engineering

University of Moratuwa

Sri Lanka

April 2015

Declaration

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by any another person except where the acknowledgement is made in the text.

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I carried out the work described in this report under the supervision of Dr. VPC Dassanayake.



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Abstract

It is quite an obvious fact that as with progress of time various types of sophisticated innovative machines are developed in the world from time to time in order to mechanize and improve the enhancement of the productivity of manufacturing processes. Weaving machine and the sewing machine are very typical examples. With the evolution of advancement in technology in the textile technology in the west have moved extensively to more developing extents, as the labor cost is relatively cheaper in these regions, mechanization was not essentially a commercially viable option. Therefore the cause for the pace of development of the industry has dropped drastically.

In this particular instance Sri Lanka has arrived at a rising labor cost and therefore it's not viable to execute all the manual operations which were previously made profitable for the business. As a result of this we were forced to be pushed towards 2 options where it was to let go these operations to cheaper destinations or invent novel innovative productive processes for these operations.

This study done was with the main objective of proposing a novel productive method for bugle bead attaching mechanism, it involves a novel method of stitching, a novel needle type. This analyses the needle head influence over the final quality, selection of thread types and possible bead releasing angles.



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