INVESTIGATION OF ERGONOMICS RISKS RELATED FACTORS AFFECTED TO RE BAR WORKERS IN CONSTRUCTION SITES

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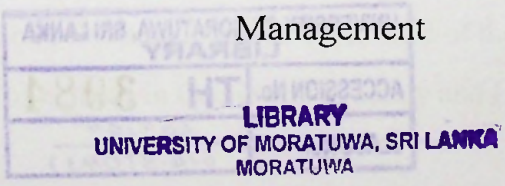
Degree of Master of Science in Occupational Safety and Health Management



Department Of Building Economics

University of Moratuwa
Sri Lanka

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Dissertation submitted in partial fulfillment of the requirement for the Master of Science in Occupational Safety and Health Management

Department of Building Economics

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DECLARATION

I declare that this is my own work and this dissertation 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 another person except where the acknowledgement is made in the text.

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Dr. Sachie Gunatilake Date

Dissertation Supervisor

ABSTRACT

INVESTIGATION OF ERGONOMICS RISKS RELATED FACTORS AFFECTED TO RE BAR WORKERS IN CONSTRUCTION SITES

When thinking about Sri Lankan workers, professionals in OHSE, other involving parties are not interested in Ergonomics due to various reasons such as non-availability of data, ergonomics risk are not available in short term, workers do not think that they will face such illness as muscular skeletal disorders in their work life, consideration on manufacturing industries who have foreign base in Sri Lankans and apparel trade have followed ergonomics to some extent. In construction industry no strong evidence have been found and it is necessary to propose a framework to enhance health and safety conditions in construction industry in Sri Lanka.

This study is aiming to identify the Ergonomics risk factors faced by reinforcement workers in construction industry. The descriptive study was carried out through a preliminary survey, questionnaire survey and case study of selected workers. Data was analyse by using Percentage on work patterns, frequencies, averages of selected criteria and risk factor assessment tools. Mean and Mode also adapted to the analysis.

Almost eighteen criteria were selected for analyses the collected data along with the posture analyses modal. As per the analysis tools posture scores are under very high & high levels, As per the other criteria's work patterns was not in satisfactory levels according social criteria. On recommendations, In general labor handing on reinforcement work has to do in more organized manner to overcome ergonomics complications at construction sites.

Keywords: Ergonomic Risk Factors , Construction Sites , Posture Analysis , RULA Analysis ,REBA Analysis ,Re bar workers .

Dedication ……..

This Dissertation

Is Lovingly Dedicated to

My beloved Father, Mother, Wife & Friends

For their loving Support & Guidance

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This dissertation is not just a single effort of mine but this is a result of an immense effort and support given by lots of others. Therefore, I would like to extend my sincere thanks for the others who spent their valuable time with courtesy.

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LIST OF ABBREVIATIONS

Abbreviation	Description
BBs	Bar benders
BBHs	Bar bender Helpers
BLS	Buru of Labour Statistic
CTD	Cumulative trauma disorders
EERFM	Effective of Ergonomics Risk Factors Management
EHS	Environment Health & Safety
ERF	Ergonomics Risk Factors
ERFA	Ergonomics Risk Factors Assessment
ILO	International Labour Organization
MSDs	Muscular Skeletal Disorders
NIOSH	National Institute of Occupational Health & Safety
OCRA	Occupational Repetitive Action Index
OHSE	Occupational Health Safety & Environment
PATH	Posture Activity Tools Handling
RULA	Rapid Upper Limb Assessment
REBA	Rapid Entire Body Assessment
RWs	Reinforce Workers
WRMSD	Work Related Muscular Skeletal Disorders

LIST OF APPENDICES