

**RECOMMENDATIONS FOR IMPROVING OSH
PRACTICES IN THE FIREWORKS INDUSTRY IN
SRI LANKA**

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May 2023

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**Dissertation submitted in partial fulfillment of the requirements for the
MSc/PG Diploma in Occupational Safety and Health Management**

**Department of Building Economics
Faculty of Architecture**

**University of Moratuwa
Sri Lanka**

May 2023

Declaration

I declare that this is my own work. This thesis/dissertation does not incorporate without acknowledgement of any material previously submitted for a degree or diploma in any other University or Institute of higher learning. To the best of my knowledge and belief, it does not contain any material previously published or written by another person except where the reference is made in the text. I retain the right to use this content in whole or part in future work (such as articles or books).

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24.05.2023

Date:

The above candidate has carried out a research for the Master's thesis/dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of Supervisor: Prof (Mrs.) Nayanthara De Silva

Signature of the Supervisor:

Date:

Abstract

Firework industry is considered accident-prone due to the usage of several hazardous chemicals in manufacturing. The number of employees working in this industry is less than 0.8% of the manufacturing sector workforce in Sri Lanka. The average number of fatal accidents reported to the Department of Labor is between 70 and 80 per year. The firework industry records at least three fatal accidents within the above figure. It shows that fatal accidents in the firework industry are very high compared to the total reported accidents, creating numerous economic and social problems.

The objectives of this study are to identify the accident-causing factors during the firework manufacturing process, review the existing OSH practices and recommend strategies to enhance OSH in the Sri Lankan fireworks industry.

A questionnaire was designed using the literature findings and forwarded to five experts directly involved with the firework industry to seek further improvements. According to the convenient sampling technique, thirty factory samples are selected to cover all the districts where the fireworks industry operates.

The result shows that mistakes made in factory and layout design and selection of construction materials and accessories, not adopting new technologies, shortage of the existing laws and regulations, incorrect handling of chemicals, poor management and employee practices and also improper maintenance are common contributors to firework factory accidents in Sri Lanka.

The study identified the requirement of updating the existing laws and regulations along with the changes in factories, production processes and products, encouragement of customer-based safety mechanisms, training and awareness.

Keywords: Fireworks, Accidents, Occupational Safety, Sri Lanka

Acknowledgement

This research study would not have been possible without the help of other people. I want to reflect on those who have supported and helped me so much during this research study.

This study was only possible with my supervisor's proper guidance, assistance and encouragement, Head of the Department of Facilities Management and Program Director of MSc in Occupational Health and Safety Management, Moratuwa, Prof (Mrs.) Nayanthara De. Silva. Therefore, firstly, I tender my sincere thanks and express my gratitude for her excellent supervision, constant encouragement throughout my studies and providing appropriate guidance and advice at the University of Moratuwa.

I am also grateful to the academic and non-academic staff of the Department of Building Economics at the University of Moratuwa for their continuous support during the MSc programme.

I am deeply grateful to Eng. D.L.A. Peris (Retired Additional Commissioner General, Department of Labour), Eng. E. Abeysiriwardena (Additional Commissioner General, Department of Labour), Eng. K.M.U.B. Kulasekara (Commissioner of Labour) , Eng. M.H.I. Lakmali (Specialist Factory Inspecting Engineer, Department of Labour), all District Factory Inspecting Engineers and Factory Inspecting Engineers in the Department of Labour for their selfless devotion, caring encouragement and tremendous support in collecting data have always been the source of my strength throughout these few years.

Last but not last, I wish to thank my family, my office staff and all others for the unstinted support given to me during my study.

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LIST OF ABBREVIATIONS

Abbreviation	Description
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Association
ILO	International Labour Organization

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