# TABLE OF CONTENTS

## Preliminary Part

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>3</td>
</tr>
<tr>
<td>Declaration by the author</td>
<td>6</td>
</tr>
<tr>
<td>Certificate from Supervisor</td>
<td>7</td>
</tr>
<tr>
<td>Abstract</td>
<td>9-10</td>
</tr>
<tr>
<td>Scope of Research Study</td>
<td>12</td>
</tr>
<tr>
<td>List of Figures</td>
<td>16</td>
</tr>
<tr>
<td>List of Tables</td>
<td>17</td>
</tr>
<tr>
<td>List of Photographs</td>
<td>18</td>
</tr>
</tbody>
</table>

## Chapter 1: Introduction

### 1.1 Executive summary

### 1.2 Methodology

## Chapter 2: Objective Methodology of Research

### 2.1 Objectives

### 2.2 Causes of Industrial Accidents

### 2.3 Control and minimization of Accidents

### 2.4 Present scenario of M/s JSW Steel Limited & Improvement Plan

### 2.5 EHS Culture

#### 2.5.1 Employee engagement

#### 2.5.2 Employee satisfaction

#### 2.5.3 EHS Ladder

### 2.6 Works Environment Factors

### 2.7 Motivation

### 2.8 Theoretical frame work

### 2.9 Source data

### 2.10 Examples of occupational stresses

### 2.11 Data collection

### 2.12 Software and physical tools

### 2.13 Literature survey

### 2.14 Software development and its applications
Chapter 3: Evaluation of Existing EHS culture of different categories of employees and assessment of works environment. ------------------------------- 41

3.1 EHS Evaluation Results ------------------------------- 41
3.2 BBS Evaluation Results ------------------------------- 42-44

Chapter 4: Identification of areas of Improvement among employees below the Generative EHS Culture. Improvement of working condition.----------------- 45-49

Chapter 5: Improvement Plans to raise employees having lower EHS Standards and reevaluating their improved EHS culture. Re-assessment of works environment. ------------------------------- 50

5.1 Controlling of unsafe acts and unsafe conditions ---- 50-52
5.2 Training Programs ------------------------------- 53
5.3 Reassessment of Works Environment----------------- 54

Chapter 6: Comparing EHS Performance at the time of evaluating existing EHS culture and after bringing in improvements among employees requiring EHS improvement. ------------------------------- 55

6.1 Comparison of EHS Performance at the beginning and after improvement. ------------------------------- 55-59
6.2 Improvement of Safety Performance ----------------- 60-64

Chapter 7: Evaluating and improving stresses and strains of Work Environment Hygiene Factors. --------------------- 65

7.1 Hygiene Index Study ------------------------------- 65-66
7.2 Hygiene Index for Strain ------------------------------- 67
7.3 Hygiene Index for Relaxation ------------------------------- 67
7.4 Hygiene Index Study conforming to ILO Modeling using advance software developed. ------------------------------- 68-69
7.5 Hygiene Index and Hygiene Index for Relaxation for different Tasks ------------------------------- 70
7.6 Work Environment Evaluation Results --------------------- 71
| 7.6.1 | Fume Extraction System | ----------------------------- | 72 |
| 7.6.2 | Reduction of Noise Level | ----------------------------- | 72 |
| 7.6.3 | Improving works illumination level | ----------------------------- | 73 |
| 7.6.4 | Reduction of gas concentration PPM | ----------------------------- | 74 |

**Chapter 8:** Studying the Productivity improvements resulting from improvements in EHS Culture and Hygiene Index Levels ----------------------------- 75-80

**Chapter 9:** Conclusions ----------------------------- 81-82

Photographs ----------------------------- 83-91
Appendix ----------------------------- 92-197
Bibliography ----------------------------- 198-206
Reference ----------------------------- 207
Curriculum Vitae ----------------------------- 208-214