



Identification of Occupational Diseases and Injuries among the Workers Engaged in Manual Material Handling of Cement Industry

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ABSTRACT : This paper analysis, identification of Occupational diseases and injuries among the workers engaged in manual material handling .Occupational diseases and injuries data were collected by using questionnaires and personnel interview of the workers in different parts cement industries like Coal mill, Preheater, Kiln, Bag house and Packing Plant. These data were analyzed in terms of different variables, such as experience, age, skills, type of injuries and type of diseases in number of cement industries in (MP),India

Keywords: Occupational Diseases; Injuries; Questionnaires; Personnel interview.

I. INTRODUCTION

Cement industry comes on Serial no 8th of the schedule I [1] of The Indian Factories Act 1948. In every year lots of minor, major or fatal accidents are occurred due to material handling. Hazards associated with material handling are more as compared to the other. Every Occupational disease and injury has a major effect on economy due to loss of productive hour, manpower losses, compensation to the victim's .Therefore for reduction of all occupational diseases, injuries/fatalities, corrective and preventive action should be taken.

There is nineteen kinds of ailments were recorded in the cement factories in JK Cements Ltd. at Khrew (Administrative district Pulwama) Kashmir, India and Saifco and Khyber cements Ltd. at Khonmoh (administrative district Srinagar) Kashmir, India [2]. These included: Allergic reactions that interfered with breathing, chronic bronchitis, asthma, emphysema, Lung cancer, pneumonia, tuberculosis, shortness of breath, cough, wheezing, stroke, Chest pain, irregular heartbeat, swelling in legs and feet (not caused by walking), High B.P, eye irritation, skin allergies, anxiety and fatigue. The Case study was [3] in selected cement industries of Bangladesh these are Unique Cement Industry LTD. situated at Sonargaon, Narayanganj; Meghna Cement Industry LTD. situated at Khulna; Chatak Cement Industry LTD. situated at Chatak, Cimex Cement Bangladesh LTD. situated at Mahmudnagar, Bondar, Narayanganj. These case Study concluded that various agents of Accident in cement industries.

Material Safety Data sheet of dry Silica [4] can also gives the detail description of health hazard caused by the silica dust.

II. METHODOLOGY

Various Interviews of the worker has been conducted during the material handling of various parts of cement industries like Coal mill, Preheater, Kiln, Bag house and Packing Plant. The Interviews based on health hazards and different types of injuries associated with workers engages in manual material handling of the cement injury. The interview can conducted randomly on 80 workers of different age groups .the Questioners and checklist according to which interview can be conducted are given bellow

S.No	Worker's Age	No of worker inspected in cement industries
1.	Between 18-28	26
2.	Between 29-40	23
3.	Between 41-60	31

<u>Questioners related to health hazards of the workers[2]</u>		
Name of Worker.....		
No. of years since working in the factory..... Age.....		
<u>Have you ever had any of the following conditions during 6 months?</u>		
Any reportable diseases	No	Yes
Skin allergies or rashes	No	Yes
Eye irritation	No	Yes
Weakness or fatigue	No	Yes
Lung cancer	No	Yes
Chest injuries or surgeries	No	Yes
Asthma as an adult	No	Yes
Pneumonia in the last month	No	Yes
Tuberculosis	No	Yes
Kidney diseases	No	Yes
Non malignant respiratory disease	No	Yes
Respiratory allergy due to dust	No	Yes
Anxiety	No	Yes
Hearing Problem	No	Yes
<u>Pulmonary or Lung illness during 6 months?</u>		
Shortness of breath	No	Yes
Shortness of breath during activity	No	Yes
Cough	No	Yes
Wheezing	No	Yes
<u>Cardiovascular or heart problems during 6 months?</u>		
Heart Attack	No	Yes
Stroke	No	Yes
chest pain	No	Yes
Irregular heart beat	No	Yes
Swelling in your legs or feet (not caused by walking)	No	Yes
High B.P	No	Yes
<u>Other kind of problems apart from this (Write Symptoms)?</u>		
1.		
2.		
3.		
4.		
5.		

Date.....

Signature.....

Questioners related to different type of injuries to the workers while working

1. Name of Worker and No. of years since working in the factory:

2.Age

3.Permanent /Temporary:

4.Workexperience:

5.Any injury during lifting of material (major/minor):

(i)Reasons-

(ii)Which part/parts of the body is affected due to this-

(iii)Number of days lost due to this-

6.Any near misses during lifting of material:

Reasons -

7.Any Musculoskeletal injury during lifting of material:

8.How many times you have lifted the load in a day:

9.How much load you have lifted in one time:

10.Do you have knowledge about the correct lifting posture:

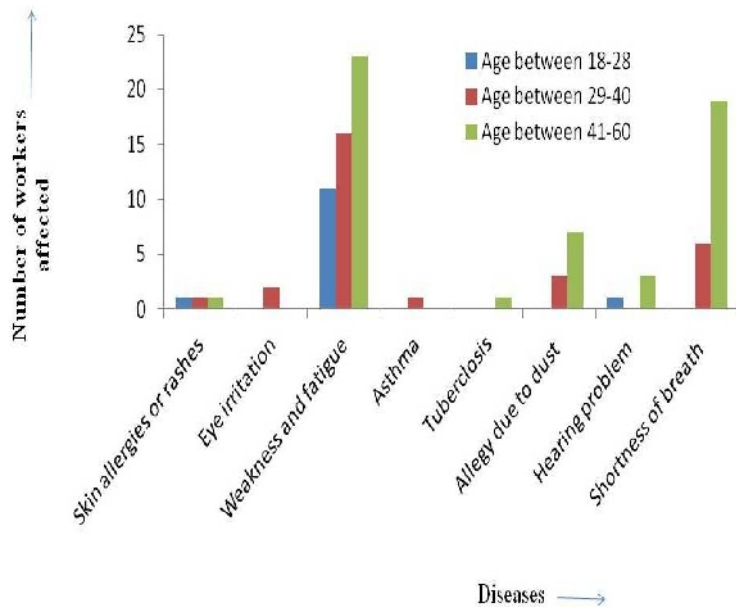
11. Do you wear all necessary PPEs during work:

12 . Interval of rest during each handling:

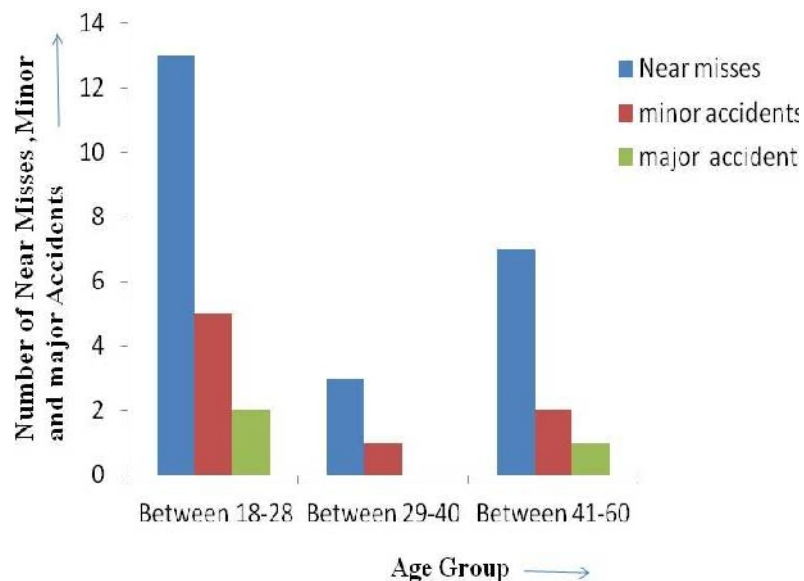
Date.....

Signature.....

Graph showing the Number of workers affected by diseases in various section of cement Industries



Graph showing the Near misses, Minor and Major accidents (Age wise.) in various parts of cement Industries



IV. CONCLUSTION

This study has been conducted by taking some variables into considerations to get an overall view of occupational diseases and injuries among workers engaged in manual material handling and to enhance safety conditions of the cement industries that are studied.

While conducting the study, it was found that workers of different age groups were mainly suffered from shortness of breath and fatigue and most of the injured workers were highly skilled and unskilled. Overconfidence were found to be the major causes of injuries and near misses for skilled workers and lack of awareness, carelessness were common in unskilled workers. It is found that there were nineteen kinds of diseases in the cement factories [2]. But few diseases were also there like Kidney diseases, Non malignant respiratory diseases, black lungs disease, Silicosis etc, although these diseases were not found, but in nearby future may be they will found.

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