INTRODUCTION

Brick kilns and stone crushers are important small scale industries in India. It is estimated that more than 100,000 kilns produce about 80 to 100 billion bricks per year in India. The employment in brick kiln industry is approximately eight million people. Stone Crushing Industry involves in manufacturing crushed stone and chips of various sizes depending upon the requirement. It has been estimated that there are more than 12,000 stone crushing units in our country. Yearly turnover of Stone Crushing Industrial is estimated to Rs. 5000 crores. This sector has been estimated to be providing direct and indirect employment of manpower to more than 500,000 people who work in different activities such as mining, crushing plant, transportation of mined stones and crushed products etc. Brick and stone crushing industries supply bricks and different sizes of crushed stones for various construction purposes such as construction of housing sector, bridges, roads, highways, buildings and canals etc. in both rural and urban areas.

According to Pollution Control Board, Guwahati, (2013) the state has 912 permanent brick kilns. There are 182 brick units and 94 stone crushing units in Barak Valley as per the data provided by the Pollution Control Board, Regional Office Silchar, Cachar, Assam.

The area around the brick and stone crushing units are constantly polluted by dusts and smoke that spread in the atmosphere, thus causing damages to the environment and various types of health hazards and respiratory diseases to the workers of the units as well as surrounding population. The dust also adversely affects visibility, reduces production and growth of vegetation and hampers aesthetics of the locality. The brick and stone crushing industries belong to unorganized industrial
sector in the country. There is no workers’ union in these industrial units. The workers of brick industry are seasonal and employed on contractual basis.

Government of India enacted different laws from time to time in order to improve the safety & security, health & welfare of the workers. For prevention of industrial accidents and occupational health hazards, there are different provisions for the safety, health and welfare of the workers of these industries under Factories Act, 1948. For contract labour, there are provisions regarding the welfare and health under the Contract Labour (Regulation and Abolition) Act, 1970. To minimize pollution and prevent occupational health hazard, there are provisions under Air (Prevention and Control of Pollution) Act, 1981, Environmental Protection Act, 1986, Noise Pollution (Regulation and Control) Rules, 2000, and Water (Prevention and Control of Pollution) Act, 1974.

In the present research work an attempt has been made to the study of the state of implementation of legislative provisions regarding prevention of industrial accidents and occupational health hazards in brick and stone crushing industries of Barak Valley, Assam.

**STATEMENT OF THE PROBLEM**

Willing co-operation on the part of workers towards the smooth functioning of the organizations in general and the continuance of uninterrupted production in particular, is an agreed condition for the normal functioning of the organizations. Nevertheless, the willing co-operation by the workers alone cannot ensure the delivery of the goods in time and properly. In to-day’s highly mechanized industrial system, machines and chemicals etc. play an important role in increasing quality and quantity of production in spite of the fact that these machines and chemicals often
leave some harmful effect on the environment and health of the workers and surrounding people. The industrial workers are the worst sufferers of industrial pollution. They have to bear the brunt of accidents and hazards, sometimes impeding the industrial activities for a short duration and sometimes for a long period.

Therefore, the protection of workers from the risk of industrial accidents and occupational health hazards would naturally place them in a better position to contribute towards the attainment of better organisational objectives.

Thus, protective measures must be taken from different quarters/corners to save the workers’ health from the ill-effects of the machines and chemicals. However, unwillingness of the employers (mostly private) primarily for profit motive, lack of awareness among the workers over the matter, lacklustre arrangement and supervision by the Governments concerned etc. are the reasons which could not lead to the effective arrangement for prevention of and cure against the industrial accidents and occupational health hazards. The Governments nowadays, of course, have made some provisions in this regard, aiming at improving the situation.

To have proper safety and precautionary measures against industrial accidents and occupational health hazards is the fundamental right of all workers. Therefore, hygienic environment is an integral part of right to healthy life and it would be impossible to live with human dignity without a humane and healthy environment. There is a constitutional imperative on the State Government and the municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve both the man-made and the natural environment.
In India, a large number of people die in industrial accidents and occupational disease. World Health Organisation (1997) estimated that 10 to 30 per cent of workers in developed countries and up to 30 per cent of the workers in developing countries are exposed to physical hazards and it is found that accidents in industries can be reduced by 50 per cent with the adoption of safety system and changes in behavioural and management practices. It has been estimated that 250 million occupational injuries and 3, 30,000 fatalities occur each year. However the provisions made in this regard to ensure the improvement in the situation are only to a minimal level.

The reason behind it probably is that the governments feel that to ensure the compliance at a minimum level is their unavoidable responsibility and if the employers concerned are willing and can afford to do more in this regard they are free to do so.

In such a situation where the employers’ poor financial conditions and also their unwillingness (for profit motive) do not permit them to do more than what is needed in this regard (in most of the cases), coupled with the fact that the workers are neither greatly aware about the long term ill impact of the menace nor they are properly united, it becomes very important to have a review of the state of implementation of the legislative provisions regarding industrial accidents and occupational health hazards in our industries.

For reasons, largely related to convenience, it has been decided to probe into the affairs of Brick Industry and Stone Crushing Industry in Barak Valley, Assam on the matter. These industries have also been selected for the reason that emissions caused by these units affect the environment badly, and there is need for
implementation of the different relevant acts to prevent and control industrial accidents and occupational health hazards.

REVIEW OF LITERATURE


Reviewing the works related to various legislative provisions on industrial accidents and occupational health hazards; it has been found that there had been few studies Ghosh Suparna and Nayan Barua (2009), Patil et al (2009), Pandit Kameshwar, et al (2009), Roy Sunita (2009), Saini S. Debi (2009), Sebastian Gilbert
(2009), Labour Bureau (2004)] dealing with various legislations on labour welfare, working of the Contract Labour Act, labour law etc..

Therefore, it is observed from the review of literature that though a good number of studies have been made on industrial accidents, occupational health hazards, labour legislation and its implementation and also the studies on brick and stone crushing industries, but no study was conducted on the state of implementation of the legislative provisions regarding prevention of industrial accidents and occupational health hazards in brick and stone crushing industries of Barak Valley, Assam.

OBJECTIVES OF THE STUDY

The following are the main objectives of the present study:

1. To study the legislative provisions and its implementation regarding prevention of industrial accidents and occupational health hazards in Brick and Stone Crushing Industries of Barak Valley.

2. To study the perceptions of the workers, and the employers/managers of Brick and Stone Crushing Industries with regard to the state of implementation of legislative provisions regarding prevention of industrial accidents and occupational health hazards in Brick and Stone Crushing Industries of Barak Valley.

3. To recommend the remedial measures, if so required, that could help in reducing/eliminating the possibilities of poor or non-implementation of legislative provisions regarding prevention of industrial accidents and occupational health hazards in both the Industries of Barak Valley.
HYPOTHESES OF THE STUDY

The following hypotheses are framed keeping in mind the objectives of the study:

1. There is no significant difference between the perception of the workers and employers/managers of two categories of industries chosen for the study with regard to the state of implementation of legislative provisions.

2. The perception of the workers regarding implementation of preventive measures for protection against industrial accidents and occupational health hazards and the selected variables (such as – sex, age and education) in both the industries under the study is independent.

METHODOLOGY OF THE STUDY

The study was carried out with the help of both primary and secondary data. The secondary data were collected and used in the form of existing legislative provisions regarding prevention of industrial accidents and occupational health hazards, different books, journals, periodicals, Government and Non-Government reports, judicial decision, statistical information, data available in different handbooks published by Government of Assam and India etc. as well as from relevant websites.

The primary data, on the other hand, were collected from 50 employers/managers and 335 workers of brick and stone crushing industries by using questionnaires/schedules. This research work is conducted on 50 numbers of brick and stone crushing units in Barak Valley, Assam. Out of 50 units, 20 bricks units and 30 stone crushing units have been selected for the study.

Moreover, interview was conducted with the Officers/Executives of District Pollution Control Board, Officer, Factory Office, District Cachar, Karimganj &
Hailakandi, Managers & staff, District Industry and Commerce Centre, Labour
Officers/Inspectors and Medical and Health Officers of all the three districts to gather
the rules and regulation and preventive mechanism and implementation of the
legislative provisions regarding industrial accidents and occupational health hazards
of all the two categories of industries chosen in Barak Valley. Data and information
have also been collected by arranging interviews with the employers, dealers,
technical experts and other related persons of the selected /chosen two categories of
industries.

The collected data were analysed and tabulated by using different statistical
tools and techniques like percentages, average, Z test, chi-square test etc. By using
Excel, diagrams, graphs and charts were also drawn in order to make the data visible
and attractive.

To analyse the perceptions, a Likert type five-point ranking scale which ranges
for fully implementation of legislative provisions to not at all implementation of
legislative provisions, has been developed and Z test has been conducted for testing
the null hypothesis.

To find out association, if any, between the selected variables in the study
such as age, sex and education and perception of the workers of all the two categories
of industries chosen for the study towards the different provisions of Acts under
study, the chi-square test has been used.

SCOPE OF THE STUDY

The study area includes Karimganj, Hailakandi and Cachar Districts which
constitute the Barak Valley Zone in Southern Assam. Brick and Stone Crushing
Industries are the purview of the Factories Act, 1948. For the fulfilment of the first objective of the present research work, i.e. to study the legislative provisions and its implementation regarding prevention of industrial accidents and occupational health hazards in Brick and Stone Crushing Industries of Barak Valley, the relevant provisions of the Factories Act, 1948, are studied. For contract labour, there are provisions regarding the welfare and health under the Contract Labour (Regulation and Abolition) Act, 1970. In order to prevent pollution and protect environment, there are provisions under Air (Prevention and Control of Pollution) Act, 1981, Environmental Protection Act, 1986, Noise Pollution (Regulation and Control) Rules, 2000 and Water (Prevention and Control of Pollution) Act, 1974.

LIMITATIONS OF THE STUDY

The following are the limitations of the study:

1. As the selected industries fall in the unorganised sector, time series data regarding industrial accidents and occupational health hazards are not generally recorded by the owners.

2. Because of the sensitivity of legal information, there was no attempt to determine the actual implementation of all the provisions of laws which are basically related to prevent and control of industrial accidents and occupational health hazards in the selected categories of industries.

3. One important limitation of the primary data is that most of the workers are unaware of different laws which have been enacted from time to time for their safety and security, due to illiteracy and less education. Even they do not know their legitimate rights during the working hours in the unit. Though owners and
managers are educated but most of them are not adequate aware of the various legislative provisions relating to industrial accidents and occupational health hazards.

4. Another important limitation is related to memory bias of the owners/managers and workers. Owners are generally maintaining very limited record of their units in respect of accidents and health hazards of workers. Therefore, the information supplied by the illiterate and unaware respondents may suffer from the limitation of their memory. Hence, data and information cannot be expected to be completely free from memory bias.

5. The study does not cover financial matter, marketing sector, profit and risk, and other technical aspects of both the categories of industries.

6. One of the important limitations is that most of the brick units are unregistered because for setting-up of brick unit, registration is not mandatory. As a result, some unregistered brick units might have been dropped from the present study.

7. A further limitation of the study is that methodology used may not gauge the qualitative attributes of the respondents like educational and moral standards, social beliefs and legal bondages etc.

8. Moreover, the correctness of the findings of the study will be dependent upon the correctness of the responses made by the sample workers or employees, and employers or managers in Brick and Stone Crushing Industries in Barak Valley, Assam.
CHAPTER PLANNING

The whole study is divided into six chapters namely:

Chapter-1: Introduction

Chapter-2: Profile of Brick Industry and Stone Crushing Industry in Barak Valley.

Chapter-3: Legislative Provisions to Prevent Industrial Accidents and Occupational Health Hazards.

Chapter-4: Judicial Approach to Control Industrial Accidents and Occupational Health Hazards.

Chapter-5: Analysis of Data and Interpretation of Result.

Chapter-6: Summary of Findings, Conclusion and Suggestions.

OBJECTIVE WISE SUMMARY

The First Objective: After studying the legislative provisions and its implementation regarding prevention of industrial accidents and occupational health hazards in Brick and Stone Crushing Industries of Barak Valley, the following main findings have emerged out:

1. Fencing of machinery: It has been found that only 5 stone crushing units are having fencing of machinery, others do not have any fencing of machinery. So, this provision is partially implemented for safety of workers in stone crushing industry. This provision is not applicable in brick industry, since it is manual industry.

2. Work on or near machinery in motion: The study has revealed that sometime injuries take place in stone crushing industries while cleaning of
machine for which caution and training may be imparted. In case of brick industry, the provision is not relevant as the operation system is manual.

3. Employment of young persons on dangerous machines: There is no need of employment of young persons on dangerous machine in stone crushing industry. In brick industry no machine is used.

4. Striking gear and devices for cutting off power: There is automatic Power cut off arrangement to prevent accidents in all the stone crushing units. In view of the brick industry, there is no need for such provision because of nature of the industry for production is manual.

5. Casing of new machinery: It has been observed that all the selected stone crushing units are maintaining this provision. This provision is not relevant to brick industry as the operation system is manual.

6. Revolving machinery: The survey revealed that the provision is adequately maintained by all stone crushing units in Barak Valley, Assam. In case of brick industry, this provision is not relevant, since brick industry is basically based on manual processing of production.

7. Floors, Stairs and means of access: Steps, stairs etc. were found in all the selected stone crushing units for prevention of accidents. In case of brick industry, it is not applicable.

8. Excessive weights: It has been found that all the stone crushing units have installed excavator cum loader (pay loader) for lifting or moving raw materials as well as finished products. While 6 units out of 20 brick units also use excavator cum loader (pay loader) for carrying and moving raw materials for its production purposes.
9. **Protection of eyes:** The survey has revealed that 90 per cent of the workers of brick and stone crushing industries do not use suitable goggles during the working hours. The measure, therefore, is not implemented fully. The workers require awareness from employer for wearing suitable goggles for protection of eyes.

10. **Precautions against dangerous fumes:** The study clearly showed that only firemen are allowed to check the brick during the period of burning and skilled workers who are having experience and knowledge for unloading of fired bricks from the kiln are allowed to enter in the kiln of brick unit. In stone crushing industry, this provision is not generally applicable. Only 8 stone crushing units have installed generator set with canopy for production purposes. It is admissible while using generator set.

11. **Precaution in case of fire:** It is clearly shown that none of the unit has installed fire extinguisher which is also a precautionary equipment of fire. Therefore, the employers should be more cautious to prevent the risk of fire.

12. **Power to require specifications of defective parts or tests of stability:** It has been observed that the provision under Sec.39 of the Factories Act 1948 is maintained in all the selected brick and stone crushing units in Barak Valley, Assam.

13. **Safety of buildings and machinery:** The survey has revealed that there is no use of machine in brick industry. In case of stone crushing industry, no machinery was found and reported in a dangerous condition. Protection against human life or safety of the workers is maintained in all the units.

14. **Implementation of rules made by State Government/Pollution Control Board:** All the units of brick and stone crushing industries were found to follow
the guidelines, rules and regulations which have been framed by State Government and Pollution Control Board for preventing and controlling occupational health hazards of human life or the safety of the workers.

15. **Cleanliness:** It was found that the production process of brick and stone crushing industries is carried out in the open campus of the unit. However, cleanliness is always taken as preventive measures for maintaining good health of the workers in all the units. Therefore, it is observed that the campus of the industry is neat and clean which is maintained by all the units of the industries.

16. **Disposal of wastes and effluents:** According to Section 12 under Factories Act as amended in 1976, no disposal of wastes and effluents was found in brick and stone crushing industries. Almost all waste products of both the industries are sold and used as an input in various construction purposes.

17. **Dust and Fume:** The survey has revealed that for controlling of dust and fumes, the brick industry uses water spraying, installation of fixed chimney, plantation etc. and stone crushing industry has also installed water sprayers, inductor fan and bag filter system (i.e. Equipment of Pollution Control Measures), etc. They also go for plantation in the campus. It is observed that the workers of stone crushing industries use nose protector for protection of health hazards. All the firemen of the brick industry also use nose protector for protecting themselves from the evil effects of dusts and fumes.

18. **Drinking water:** Sufficient number of water points was found in all the units of brick and stone crushing industries. It has also been observed that the main source of drinking water is tube-well of 90 percent of the units. The workers drink
filtered tube-well water. From this point of view, the provision is fully implemented due to the existence of the drinking water facilities.

19. **Latrines and Urinals:** Sufficient numbers of latrines and urinals were found separately for both male and female workers in all the units of brick and stone crushing industries. It is also revealed that latrines and urinals are kept neat and clean. Therefore, this provision is implemented fully in both the categories of industries. According to Sec. 18 of Welfare and Health of Contract Labour under the Contract Labour (Regulation and Abolition) Act, 1970, a sufficient number of latrines and urinals are available for the contract labour employed in brick industry. Latrines and urinals are separately for both male and female contract labour in brick units.

20. **Spittoons:** Not a single spittoon was found for using of the workers in brick industry. But in stone crushing industry, 8 units out of 30 have provided spittoons in the front of office room, no spittoon has been provided in the working place in any of the units. Providing spittoons in the work place helps in a clean and hygienic condition also protect to spread diseases like tuberculosis (TB) among the workers in course of employment in brick and stone crushing industries.

21. **Washing facilities:** It has been observed that adequate and suitable washing facilities are available in every brick and stone crushing unit. There are separate provisions for male and female workers. It is also revealed that this provision is rightly implemented in all the units of both the categories of industries. According to Sec. 18 of the Contract Labour (Regulation and Abolition) Act, 1970, washing facilities are available for the contract labour employed in brick
units. It helps to protect the workers against occupational health hazards and occupational diseases.

22. **Facilities for storing and drying clothing:** The survey has revealed that the employers of the brick and stone crushing units provided the facilities for keeping clothing of workers. The workers are also provided the facilities for storing and for drying of wet clothing during working hours. Thus, the provision is implemented in all the units for the welfare of the workers and minimizing the health hazards of both brick and stone crushing industries.

23. **First-aid appliances:** The study is clearly showed that there is a provision for first-aid appliances for the workers in every brick and stone crushing unit as per Sec. 45 of the Factories Act 1948. Thus in case of accident or diseases the first aid medicine is provided to the workers. If the injuries or sickness is acute, the owners / managers of the units also send the workers to the Government hospital for treatment. The medical expenditure of the worker is borne by the owners. There is not a single unit where more than 500 workers are working. So there is no ambulance facility in any unit. As per Sec. 19 of Welfare and Health of Contract Labour under the Contract Labour (Regulation and Abolition) Act, 1970, there is provided and maintained the first-aid facilities by the employer of brick units for their workers during the working hours. But the contractor does not provide and maintain the first-aid box equipped with the prescribed contents at work place for contract labour in brick industry.

24. **Shelters, rest rooms and lunch rooms:** Thus, data revealed that shelter and rest rooms with drinking water facilities are provided to the workers by all the units where workers may eat meals brought by them. According to Sec. 17 of Welfare and Health of Contract Labour under the Contract Labour (Regulation
and Abolition) Act, 1970, rest rooms or such other suitable alternative accommodation within such time is provided by the employers of brick units for taking rest which can reduce the occupational health hazards of the workers. It is also revealed that the contractor or middleman does not provide or maintain such number of rest rooms or such other suitable alternative accommodation to the contract labour of the unit.

25. Constitution of Site Appraisal Committees: The survey has revealed that the brick and stone crushing units are set up under the guidelines issued by the State Pollution Control Board/State Government. It is observed that all the units of both the categories of industries are visited by the Regional Pollution Control Board, Silchar, Cachar, from time to time and are advised to adopt various provisions to prevent pollution which may cause health hazards of workers in the units. Although brick and stone crushing units do not deal with chemical/substances etc. for its production purposes, pollution is being caused by both the industries. Therefore, this provision is also mandatory for site selection in case of any polluting industry. The local civil administration issues the certificate for selection of location of both the industries. The State Government or State Pollution Control Board verifies everything properly and then issue the permission for commencement of production.

26. Workers’ participation in safety management: Not a single committee was found to workers’ participation in safety management in any of the units of the two types of industries for prevention of accidents during the working hours.
27. Disablement: No instance of injuries was found which has caused permanent total disablement or partial total disablement in brick and stone crushing industries.

28. Child care and maintenance: No appointment of another guardian is found to take place and the provision for child care and maintenance of the child was not required in both types of industries.

29. Employees’ State Insurance Fund: No Employees’ State Insurance Fund is maintained in brick and stone crushing industries in Barak Valley.

Pollution Control Board has issued some guidelines for setting up and running the brick and stone crushing industries. These are hereunder:

30. Site Selection: It has been found that as per the guidelines of Pollution Control Board, all brick kilns as well as stone crushing units have been set up on non-agricultural land which was certified by the Circle Officer of Revenue Departments of the Government of Assam and “No Objection Certificate” was issued by the Gaon Panchayat for establishment of the brick unit. In fact none of the selected brick kilns and stone crushing units has found to establish in urban area.

31. Plantation: It has also been observed from the field study that in the surrounding of brick and stone crushing units, there is a very limited plantation or growing of green trees along the periphery.

32. Fixed chimney: The survey has also revealed that the tin sheet chimney kilns converted into fixed unmovable chimney as per the direction of the appropriate authority.
33. **Dust control measures:** The study has observed that brick and stone crushing units have adopted water spraying system in the units as dust control measures.

34. **Abnormality in the machine:** No machinery is found abnormal leading in the brick and stone crushing units of Barak Valley, Assam.

**The Second Objective:** To study the perceptions of the workers, and the employers/managers of Brick and Stone Crushing Industries with regard to the state of implementation of legislative provisions regarding prevention of industrial accidents and occupational health hazards in Brick and Stone Crushing Industries of Barak Valley.

**To satisfy this objective, findings are discussed hereunder:**

1. It is found that 38 per cent employers/managers of brick and stone crushing industries admitted ‘full implementation’ of the legislative provisions for prevention of industrial accidents and occupational health hazards, while 44 per cent replied that implementation of the provisions were done in ‘large extent’, 14 per cent replied that implementation of the provisions were also done in ‘some extent’ and remaining 4 per cent admitted ‘poor implementation’ of legislative provisions.

2. It is observed that 17.46 per cent workers of both brick industry and stone crushing industry admitted ‘full implementation’ of the legislative provisions for prevention of industrial accidents and occupational health hazards, while 32.39 per cent replied that implementation of the provisions were done in ‘large extent’, 30.99 per cent replied that implementation of the provisions were also done in ‘some extent’, and also 12.39 per cent opined ‘poor implementation’ of legislative provisions, and remaining 6.76 per cent replied ‘no implementation’ of the provisions.
3. It is revealed that 20 per cent employers/managers and workers of both brick and stone crushing industries admitted ‘full implementation’ of the legislative provisions for prevention of industrial accidents and occupational health hazards, while 33.83 per cent replied that implementation of the provisions were done in ‘large extent’, 28.36 per cent replied that implementation of the provisions were also done in ‘some extent’, and also 11.36 per cent opined ‘poor implementation’ of legislative provisions, and remaining 5.92 per cent replied ‘no implementation’ of the provisions.

4. It is seen that 21.6 per cent employers/managers and workers of the brick industry admitted ‘full implementation’ of the legislative provisions for prevention of industrial accidents and occupational health hazards, while 33.6 per cent replied that implementation of the provisions were done in ‘large extent’, 26.8 per cent replied that implementation of the provisions were also done in ‘some extent’, and also 12.8 per cent opined ‘poor implementation’ of legislative provisions, and remaining 5.2 per cent replied ‘no implementation’ of the provisions.

5. It is appeared that 17.42 per cent employers/managers and workers of the stone crushing industry admitted ‘full implementation’ of the legislative provisions for prevention of industrial accidents and occupational health hazards, while 34.19 per cent replied that implementation of the provisions were done in ‘large extent’, 32.26 per cent replied that implementation of the provisions were also done in ‘some extent’, and also 9.03 per cent opined ‘poor implementation’ of legislative provisions, and remaining 7.1 per cent replied ‘no implementation’ of the provisions.
6. We have tested both null hypothesis. The first null hypothesis is rejected and second is accepted. The implications of the test is that there are differences of opinion between the owners/managers and workers in both the categories of industries. So, it is statistically established that there exists significant difference between the perception of the workers and employers/managers of two categories of industries chosen for the study with regard to the state of implementation of legislative provisions. In other words, they continue to hold different opinions with regard to the state of implementation of legislative provisions regarding prevention of industrial accidents and occupational health hazards in brick and stone crushing industries.

It is also revealed from $\chi^2$ test of the second hypothesis that the perception of the workers regarding implementation of preventive measures for protection against industrial accidents and occupational health hazards and the selected variables such as sex, age and education in both the industries under the study is independent.

**CONCLUSION**

Prevention of accidents or injuries in the industry is the joint responsibility of all concerned viz. management; employees, trade unions and government. Accidents can be minimized by imparting safety education, training, etc. It is mandatory that safety officers must visit and inspect the safety measures of brick and stone crushing industries. In this regard, State Government has framed the rules to ensure the safety and security of the workers of the brick and stone crushing industries. Both the categories of industries are also within the purview of Environment Protection Act 1986, Air (Prevention and Control of Pollution) Act 1981 and it is mandatory for these categories of industries to follow the rules enacted by the State Pollution Control Board.
The judiciary is also taking painstaking efforts to remove industrial accidents and occupational health hazards. We have seen the role of the Supreme Court in several cases like *M.C. Mehta v. Union of India* where the courts directions were not complied with in the same spirit, as the court had desired. In some case like *Taj Trapezium case* the court could succeed in taking appropriate measures. Furthermore, Indian judiciary also tries to prevent and control pollution in industrial atmosphere.

**SUGGESTIONS**

On the basis of the findings and observations made in the study, some important suggestions have been offered to strengthen the state of implementation of the legislative provisions regarding Prevention of Industrial Accidents and Occupational Health Hazards in Brick and Stone Crushing Industries of Barak Valley, Assam. These suggestions are:

1. Fencing of machinery should be made mandatory for prevention of accidents in stone crushing industry.
2. For safe and for better handling/operating of the machines and equipments, the employers should arrange training/awareness programme for the workers.
3. There is need for installation of Pay loader for carrying of raw materials & finished Products in every brick and stone crushing units.
4. Workers should not be allowed to carry of heavy load during the working hours in brick and stone crushing units.
5. There is a need to install fire extinguishers in every unit for protection of fire in brick and stone crushing industries.
6. Workers should use suitable goggles for protection of their eyes during the working hours in both the categories of industries.
7. All workers should use nose protectors during the working hours in both types of industries.

8. Adequate numbers of spittoons should be installed in the work place for good health of workers in every brick and stone crushing unit.

9. There is also need for check-up of machines properly before starting operations in every unit.

10. Workers should use helmet and shoes for protection of accidents during the working hours in the selected units.

11. Employers/managers should take properly cleanliness which can be reduced hazards and free from pollution in the surrounding of the unit.

12. Shelter and rest rooms with drinking water facilities or alternative accommodation should be provided better quality to the workers by employers of both the categories of industries.

13. Medical and Health Check-up facility should be extended in every unit, so that all workers can get appropriate and adequate benefit if any accident/injury occurs or even for illness of the worker and records of workers should be maintained properly, at the same time some other arrangement than first-aid treatment in the unit for health of the workers.

14. Workers’ participation in safety management should be involved in every brick and stone crushing unit for prevention of accidents and health hazards during the working hours.

15. Every brick and stone crushing unit should form different committees which have been notified by the Government time to time and workers’ involvement should be properly recognized in the every committee of the every unit.
16. Compensation should be paid to injured workers as per compensation Act 1923, if any accident occurs in a workplace in the selected units.

17. Employees’ State Insurance Fund should be implemented in every brick and stone crushing unit as per the Employees’ State Insurance Act, 1948, so that all workers can get the different benefits which have been prescribed under this Act.

18. As per the Welfare and Health of Contract Labour under the Contract Labour (Regulation and Abolition) Act, 1970, contractors/middleman should provide the various facilities to the contract labourers who have been supplied/employed in brick industry.

19. Employers should maintain compulsory insurance including group insurance and health insurance for every worker of brick and stone crushing industries.

20. Water sprayers should be installed in every brick and stone crushing unit for controlling dust.

21. More trees should be planted in the surrounding of the unit to make the environment pollution free.

22. Fixed chimney should be installed for prevention of pollution in every brick kiln.

23. Workers should use ear protectors during the working hours in case of stone crushing industry.

24. Safety equipment should be provided to workers during the working hours at free of cost.

25. Talley-wheeler/Vehicles should be installed for transportation of unfired bricks (raw bricks) and finished products (brunt bricks) in every brick unit.
26. All types of measures for pollution control should be installed and implemented as per prescribed by the State Pollution Control Board / State Government for prevention of occupational health hazards and diseases of workers in both types of industries.