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PREVENTION OF INDUSTRIAL ACCIDENTS, MEASURES & CHALLENGES.

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Abstract

Industries have always had sudden mishaps or accidents happening once in a while, the nature and intensity of which depends on the type of industry and various other factors. These accidents do not just affect the work culture but also the overall productivity of an organization. This research paper focuses on the prevention measures and the challenges in their implementation.

Key Words- Accidents, Challenges, Measures, Prevention

INTRODUCTION

Industrial accidents are undesirable because of both humanitarian and economic reasons. Even a minor accident may bring down the morale of the workers. Whenever an accident occurs, it may lead to wastage of time of the Employees. Therefore it is crucial for an organization to inculcate certain safety measures for the prevention of any potential harm to the employees and ensure proper implementation of the same.

COMPANY PROFILE

BAYER (VAPI)

Bayer Vapi is a core manufacturing site for the company globally and the single largest synthetic pyrethroid production facility in the world. The site produces active ingredients for use not only in India, but also for exports to countries like USA, Brazil, France, Germany, Indonesia, Japan and Australia. Nearly 80% of the company's production volumes are exported globally.

In India, Bayer's Corporate Societal Engagement focuses on four essential pillars: Empowering Women, Fostering Education, Fostering Rural Development and Preventive Health & Sanitation. The projects undertaken by Bayer Vapi include support towards the renovation and construction of a modernized extension at Audhyogik Vasahat Primary School at GIDC Vapi together with MAA Foundation; modernization of the ICU Centre and set up of a state-of-the-art Neuro-Physiotherapy Centre at a local hospital. Additionally, the company is engaged in training and handholding of small holder farmers on various topics with the aim to increase farmer prosperity across the country.

NAVNEET (VAPI)

It was founded 1959 in Mumbai. In 1993, it became a public company and listed its shares on Bombay Stock Exchange and National Stock Exchange. By 1991, sophisticated printing and binding machineries had been imported to complete the modernisation-cum-expansion plans of the company. Over the decades, Navneet has emerged as a leading Educational Products and Services company in India. Also with the new range of supplementary books targeting the students from CBSE and ICSE boards, Navneet's educational products are now made available across India Navneet also produces various titles in the Children and General books category, which are not based on syllabus, such as activity books for children, board books, story books, health related books, cookery books, mehendi& embroidery books, etc In 2016, Navneet acquired Britannica India's curriculum business for Rupees 88 crore.

RESEARCH METHODOLOGY

- **UNIVERSE:**

- Employees working in Navneet and Bayer.

- **RESEARCH DESIGN:**

- Descriptive Research Design is used to study such topic.
- Descriptive research is defined as a research method that describes the characteristics of the population or phenomenon that is being studied. This methodology focuses more on the “what” of the research subject rather than the “why” of the research subject

- **SOURCE OF DATA COLLECTION:**

- The primary as well as secondary sources were used for collection of data.
- Primary data was obtained through questionnaires filled by 50 employees.
 - **Primary Data:** Questionnaire
 - **Secondary Data:** Books and Website of Company Data Type:
 - Primary as well as Secondary data was collected.
 - Instrument used for Data Collection:

The instrument used for data collection is Questionnaire.

- **SAMPLE DESIGN:**

- Sample Size: 50
- Sample Location: Vapi

- **ANALYTICAL TOOL:**

- Pie Chart,
- Bar graph

- **LIMITATIONS OF THE STUDY:**

- Collecting Data properly from the employees become difficult due to time constraint and the Companies policies..
- Busy schedule of employees also effected to some extend.
- The study was based on sample hence results were not fully absolute

LITERATURE REVIEW

1) **Tao Zeng, Guohua Chen (2020)**,In this paper, specifically the way that safety assessments are conducted as well as how safety management and safety technology in such areas are classified and investigated.

2) **Tarun G, Dr.MuruganRamu (2018)**,A study on how industrial accidents are a bane for any industry, it causes unexpected change in the working order that is why how an industry must undertake preventive as well as damage control methods.

3) **Fabriziomaria Gobba, Enrico Dall'Olio, Alberto Modenese, Michele De Maria, Luca Campi, Gian Maria Cavallini**

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- 4) **Bansal AK (2016)**, Industrial Accidents and their Prevention: A Case of Satluj Jal Viduat Nigam Limited, Shimla, Himachal Pradesh. Intel Prop Rights. 4: 171. doi: 10.4172/2375-4516.1000171
- 5) **Tom Jose V, Sijo MT, Praveen (2013)**, In this paper, a part of the production systems of companies is studied to find the problems of the safety system of the company to make the improvements and to recommend same points to the companies for the achievement of its goals and avoid accidents.
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- 14) **Beaumont, P.B. (1980)**, "An Analysis of the Problem of Industrial Accidents in Britain", International Journal of Manpower, Vol. 1 No. 1, pp. 28-32.

15) **Bello, G. C., and Columbari, V.:** "The human factors in risk analyses of process plants: The control room operator model", in Reliability Engineering (Barking, Essex), Vol. 1, No. 1, July-Sep. 1980, pp. 3-14

16) **Buschman, C. H. (ed.):** Proceedings of the First International Symposium on Loss Prevention and Safety Promotion in the Process Industries, The Hague, 28-30 May 1974 (New York, Elsevier, 1974).

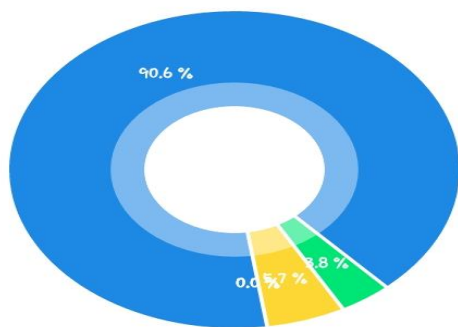
17) **Smith, Clay, Henry.** Music in relation to employee attitudes, piecework production and industrial accidents. Stanford: Stanford University Press, 1947.

DATA INTERPRETATION

2. Your age?

PIE CHART

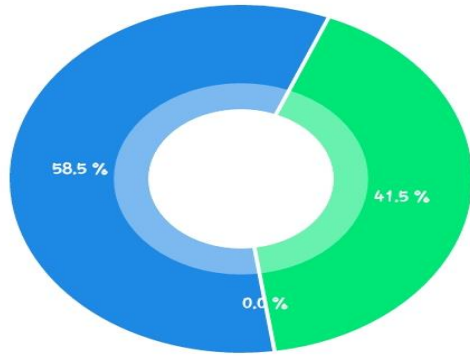
- 20-30 - 48
- 30-40 - 2
- 40-50 - 3
- Above 50 - 0
- Below 20 - 0



3. Your Gender?

PIE CHART

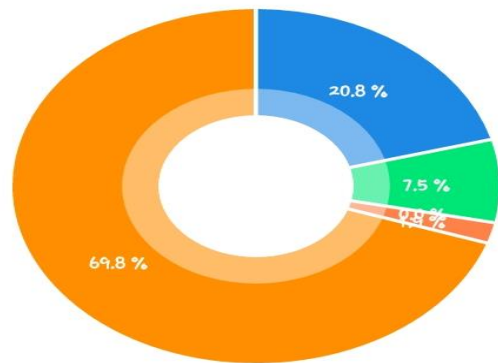
- Male - 31
- Female - 22
- Other - 0



4. What is your profession?

PIE CHART

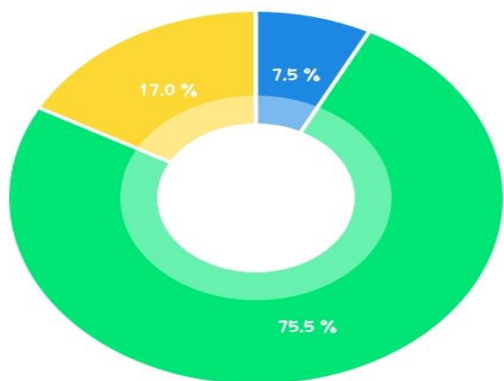
- Employee - 11
- Businessman/woman - 4
- Worker - 0
- Labour contractor - 1
- Student - 37



7. Are you aware of industrial accidents happening in india?

PIE CHART

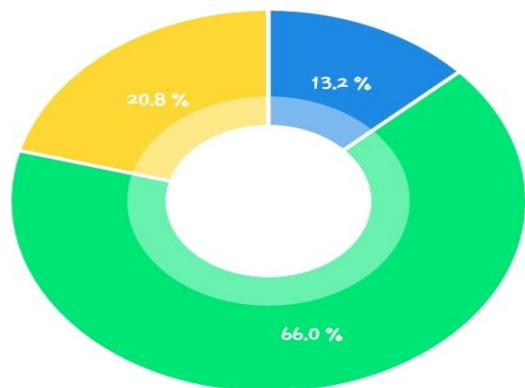
- No - 4
- yes, but not in detail - 40
- yes, very much - 9



8. Are you aware of various prevention measures taken in order to prevent industrial accidents?

PIE CHART

- No - 7
- yes, but not in detail - 35
- yes, very much - 11



9. Do you have an idea of the challenges faced while implementing the prevention measures?

PIE CHART

- No - 10
- Yes, mainly because of uneducated workers - 16
- Yes, mainly because of negligence of supervisors ...
- Yes, mainly because of non-cooperation between...

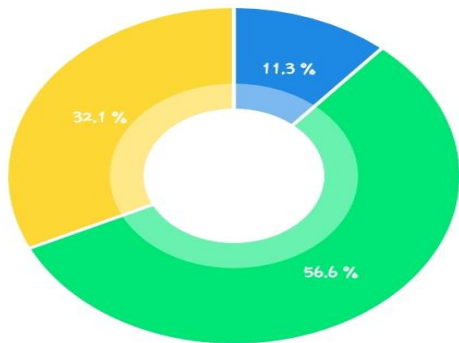


10. How much are these prevention measures actually helpful?

11. Are all essential emergency no.s like hospitals, doctors, ambulances etc known and listed?

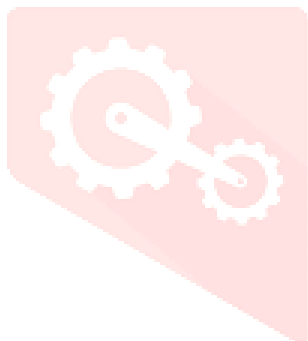
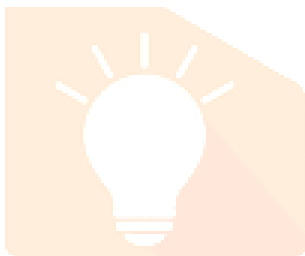
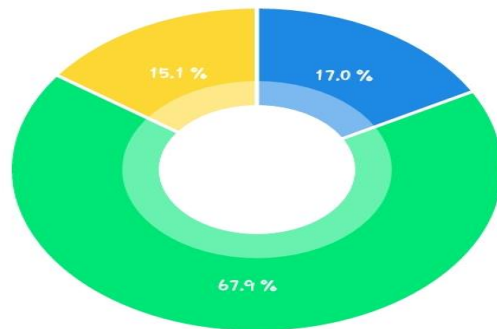
PIE CHART

- Very little - 6
- moderate - 30
- very much - 17



PIE CHART

- No - 9
- Yes - 36
- i don't know - 8

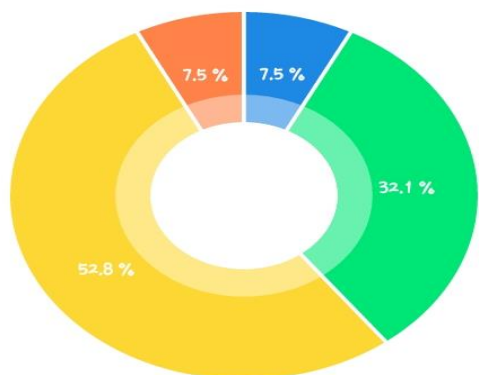


12. Are the supervisors well trained in first aid?

21. Is the information provided accurate to your best knowledge?

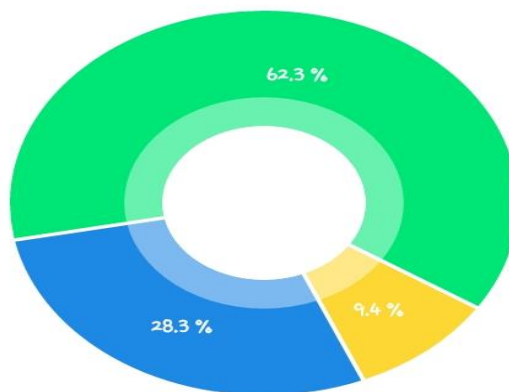
PIE CHART

- No - 4
- Yes - 17
- maybe - 28
- i don't know - 4



PIE CHART

- Yes - 15
- Yes, most of it - 33
- It is a brief idea - 5

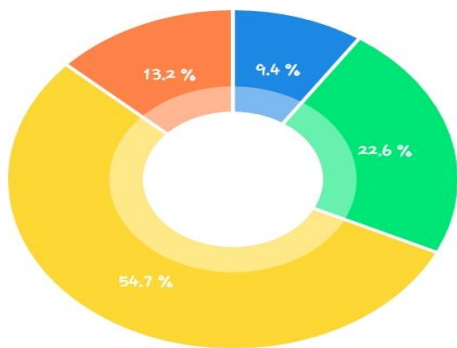


14. Is the entire accident investigation process in writing?

16. Is there a review meeting conducted by a middle level operating manager or above within a day after an accident?

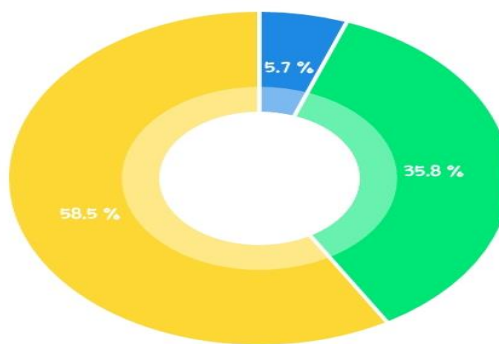
PIE CHART

- No - 5
- Yes - 12
- only in some major cases - 29
- i don't know - 7



PIE CHART

- No - 3
- Yes - 19
- only in some major cases - 31

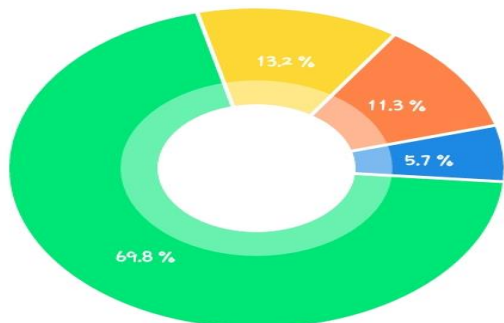


17. Is there a health surveillance program in the organization which include periodic examinations or tests as indicated by health hazard exposures and/or required by legislation?

18. Does everyone have the access to a full time medical officer or consultant group on the premises?

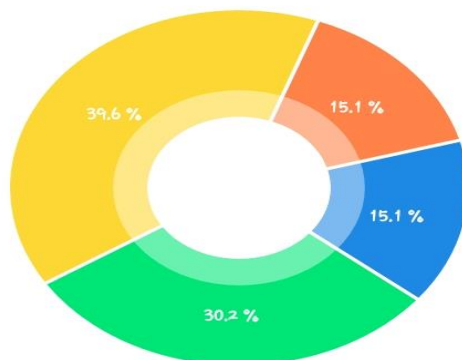
PIE CHART

- No - 3
- Yes, sometimes - 37
- Yes, regularly - 7
- I don't know - 6



PIE CHART

- No - 8
- Yes - 16
- Only in major cases - 21
- Sometimes - 8

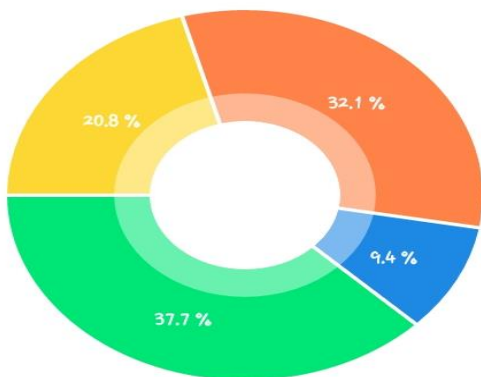


19. Are first aid reports maintained properly?

20. Is there an emergency plan that has a clear search and rescue plan?

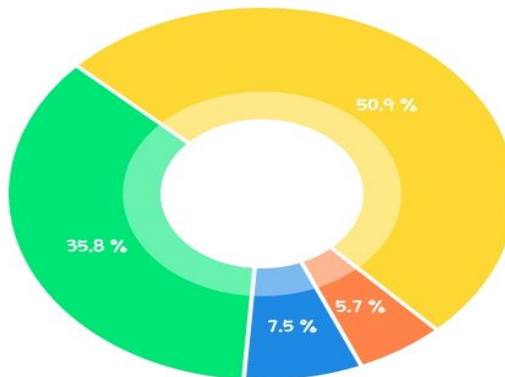
PIE CHART

- No - 5
- Yes - 20
- Only in major cases - 11
- Sometimes - 17



PIE CHART

- No - 4
- Yes - 19
- maybe - 27
- Sometimes - 3



FINDINGS

- 75.5% People are aware about industrial accidents in India but not in detail.
- 66% people are aware about various prevention measure but not in detail.
- 67.9% people have access to emergency numbers like Doctors, Ambulance etc.
- 54.7% people are aware that the entire investigation process is in written format.
- 56.6% people find these prevention measures moderately helpful.

CONCLUSION

Majority of Employees are aware about prevention measures of industrial accidents, but not in depth and therefore feel the need for adequate training for the same.

Only major cases come to surface and then review meeting is conducted by the management.

Most of the Employees think that emergency training conducted for accidents is helpful.

Almost half of the respondents think that first aid reports are maintained properly.

There is no single cause, but many; for why the prevention measures are not implemented properly. Some of them are:

- Due to negligence of management.
- Due to lack of proper communication between Management and workers.
- Due to non-cooperation among superiors and subordinates.
- Due to workers being uneducated.