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A Study on Employee Safety Measures at Sai Deepa Rock & Drills Pvt. Ltd

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I. INTRODUCTION

Employee Safety is a composite field related to Safety, health and welfare of people at work. It narrates the strategy and methods in place to ensure health and Safety of employees within a workplace. Employee Safety includes employee awareness related to the knowledge of basic Safety, workplace hazards, and risks relating to hazards, implementation of hazard preventions, and putting into practice necessary safer methods, techniques, process, and Safety culture in the workplace. It also includes Safety rules and regulations designed mostly on the basis of existing government policies. Every organization puts in place a number of Safety rules and regulations for its people. Safety training and education for employees is imparted periodically with a view to making them aware about and updating them with latest Safety measures. There are two slightly different meanings of safety. For example, home safety may indicate a building's ability to protect against external harm events such as weather, home invasion, etc. or may indicate that its internal installations such as appliances, stairs, etc. Are safe not dangerous or harmful for its inhabitants. Discussions of safety often include mention of related terms. Security is such a term. With time the definitions between these two have often become interchanged, equated, and frequently appear juxtaposed in the same sentence. Readers unfortunately are left to conclude whether they comprise a redundancy. This confuses the uniqueness that should be reserved for each by itself. When seen as unique, as we intend here, each term will assume its rightful place in influencing and being influenced by the other. Safety is the condition of a "steady state" of an organization or place doing what it is supposed to do. "What it is supposed to do" is defined in terms of public codes and standards, associated architectural and engineering designs, corporate vision and mission statements, and operational plans and personnel policies. For any organization, place, or function, large or small, safety is a normative concept. It complies with situation- specific definitions of what is expected and acceptable. Using this definition, protection from a home's external threats and protection from its internal structural and equipment failures (see Meanings, above) are not two types of safety but rather two aspects of a home's steady state. In the world of everyday affairs, not all goes as planned. Some entity's steady state is challenged. This is where security science, which is of more recent date, enters. Drawing from the definition of safety,

A. Objectives Of Employes Workplace Safety

1) To know about the hierarchy of workplace Hazards at Sai Deepa.
2) To know about the level of emergency services provided by Sai Deepa.
3) To know about statutory Safety measures provided by the company at work place at Sai Deepa.
4) To understand the satisfaction levels of the employees by safe and secure environment at Sai Deepa, which leads to the higher productivity.

B. Need & Importance For The Study

Workplace Safety is very important for each and every employee in the industry because all the workers desire to work in a safe and protected atmosphere. Health and Safety is the key factor for all the industries in order to promote the wellness of both employees and employers. It is a duty and moral responsibility of the company to look after the employee's protection.

Each and every person who leaves his home for his work in the morning should come back to his home in evening in good health. Have you ever imagined that your loved one will never be returning home? Or you get a call that he/she is in the hospital due to some incident occurred? These thoughts only get us goose bumps. This is the only reason that why it is important to create a safe working environment.

C. Scope For The Study

The scope of the responsibility requires employers to provide and maintain a safe working environment at all times, including control frequency, pace and entry to high risk areas. Ensure safe, quality systems for work on and around machinery and equipment. Ensure all exits fire accessible at all times

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D. Research Methodology

1) Primary Data: It is obtained from the direct personal & oral investigation of employees with a sample size of 100.

2) Secondary Data: Secondary data is the data that have been already collected by and readily available from other sources like literature reviews, websites, articles, journals, magazines and text books.

E. Limitations

1) The sample size selected is limited.

2) The study is purely based on the information given by the employees.

3) The time factor is collecting the responses as in conducting the research study would be limiting factor

II. REVIEW OF LITERATURE

According to Patro (2015) in a comparative analysis of safety measures in public and private sector found that an employee's‟ safety facility is the key dimension to smooth employer-employee association. These safety facilities improve the employees‟ morale and loyalty towards the management thereby increasing their pleasure, fulfillment and performance

Bhagat (2015) revealed that cleanliness is the big issue in Nashik MIDC. She suggested that cleanliness should be improved, clean & adequate latrines &urinals at the work place improve indirect motivation to employees

Sabarinathan S (2015) mentioned the 78 % of the respondents are satisfied with safety measures implemented by Erode district cooperative milk producer's union ltd. Tamilnadu. Employees are satisfied with canteen facilities. Researcher suggested that management should convert level of satisfactory into highly satisfactory.

Hangarki (2014) revealed the relationship between employee satisfaction level & safety measures in selected national bank in Hyderabad Karnataka region. It is clear that safety facilitated employment by bank are not equally satisfactory to all employees. Most of the employees are dissatisfied with the clarity and transparency in communication, training& development, lunch rooms & rest rooms, health checkup camp etc. He recommended some measures but separate lunch room & rest rooms are most important in those amenities because employees are very inconvenient to have their lunch in front of the customer.

Priyanka (2014) was taken 100 respondents from IT industry at Guntur, Andhra Pradesh & resulted that companies are very keen in promoting all the safety facility provided by the IT industry.

Madhesh (2014) instated that employees having 5-10 years' experience are highly satisfied safety measures provided by their companies in SIPCOT industrial area in Tamilnadu. He suggested some recommendations regarding safety inspector, transfer policies &disciplinary rules for betterment of employees.

Balaji (2013) explored the influence of rewards & safety on job satisfaction & productivity of both public & private sector employees in measure Industrial cities of Tamilnadu. The working environment was faire in terms of office accommodation & furniture, working material, health & Safety facilities but on the other side he recommended salary increment, allowances, bonus, fringe benefit &compensation on regular & specific periods to keep their moral high & make them productive.

Gope (2013) studied the employee per section on quality of work life in sugar mills of Uttar Pradesh(UP) found that private sugar mill employees enjoys better QWL practices in comparison to cooperative sector or employees. On lighting facilities (LF), Safety measure (SF), health facilities (HF), safety facility (WF), etc. but cooperative sugar mill employees enjoys better employee safety facilities &supervisor interference (SI) to private sugar mill employees. He suggested that to improve QWL is first to identify & then try to satisfy employee's important needs in through their experience in their working environment.

Bhati p. (2013) identified in her research work that the different provisions provided to the employees under factories Act 1948 are showing positive relation with the employee's satisfaction. Company should know the requirement of employees in term of different non- financial motivational tools. This study can be useful for identifying the factories which needs to employee satisfaction & company can use those factors retention tool for retaining employees in the organization.

Jeyapragash (2013) Studied organizational climate in total 14 banks which are 10 private sectors, new private sector & public sector banks & 280 respondents. From dindigul district, Tamilnadu the result showed that organization climate within public sector bank employees were good compared to the other private banks. They recommended other banks to improve in the level of organizational climate, performance appraisal, and image of your bank, training &development, employee grievance handling procedure etc.

Logasakthi K (2013) inferred that most of the respondents are satisfied with the facilities provided by the organization. Some of the employees are not satisfied with medical reimbursement facilities.

Regi (2013) stated that Indian overseas bank (IOB) gives more safety schemes to their employees such as Safety measures,

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promotion facility, recreational facility etc. but they are lacking in canteen facility , rest room & toilet facility, ID card issue but the overall satisfaction level of IOB employees about safety measures are satisfactory.

Kumar (2013) described that 100% employees of Tamilnadu state transport corporation, Villupuram division were aware of the safety measures in Public Sector Transport Corporation. Researcher found that most of the employees were do not satisfied with safety

Rooms & gratuity 89% employees said work load is very high. Researcher suggested the govt. to take keen interest to fill up the vacancies to share the work among them as employees are burdened with heavy workload.

Salaria (2013) studied about employee safety measures in auto sector at NCR Delhi & asserts that employees in auto sector (NCR Delhi) are highly satisfied with internal mural SAFETY measures & few are dissatisfied with extramural safety measures. Perception of the employees on total safety measures is satisfied.

Prabhakar S (2013) found employees of Don bosco college of arts and science Sogathur, Dharampuri, Tamilnadu, are very satisfied with intramural facilities but they is a need of further development in the areas of extra mural facilities like transport, leave facility, maternity benefits, promotion for the staff in college etc. Researchers recommended fixing pay scale for experienced staff in tune with the cost of living and have to think high salaries for those awarded Ph.D.

Chahal (2013) inferred from her research work that some factors like working environment, performance appraisal techniques , relationship other employees etc. are contributing towards job satisfaction in bank employees, while job dissatisfaction caused by working hours(lack of training & development) of frequent transfers of the employees . He suggested that employee safety measures/facilities of job security should be given at most importance so that the employee turnover may be restricted.

Bosibori (2012) suggested that govt. through national police service in Kenya(KISII central district) should improve the provision of health services, safety amenities& social services provided to the police officers so has to improve service delivery .

Gurusamy (2012) asserted that there is no significant relationship between the sex of the respondent& level of satisfaction on washing facilities in textile industry at Coimbatore district. Also he stated that there is a positive relationship the income of the respondent& the level of the satisfaction on canteen facilities.

Satyanarayana M. (2012) Revealed that overall satisfaction level of KCP Ltd. Employees at Macherla, Andhra Pradesh is satisfactory. However researcher suggested some measures for further improvement that are productivity – linked annual bonus subsidized food in canteen, four pairs of uniforms & increase the quantity of provisions in the co-operative stores. Such measures will enrich the employee's standard of living & satisfaction level.

Jain (2012) implied by her research work that public sector bank employees are more satisfied with his jobs rather than private bank employees the main cause of dissatisfaction among private bank employees are job in security their jobs are highly competitive. Also safety facilities and clearly defined & legally enforced in public sector banks while there is neither well planned nor well executed safety facilities in private banks. This is other reason of dissatisfaction among private bank employees. Employee's turnover high & job security low in private bank employees.

Anand (2010) stated in his research work that employees of IT sector in Chennai district are satisfied with the safety measures provided by the company. But researcher also suggested some recommendation pertaining to periodic audit of safety programs by management, personality & tress management etc. Modifications are requiring in the field of Safety consciousness, grievance handling& sexual harassment especially for women employees.

Sabarirajan (2010) concluded that the employees of textile mills in Salem district are satisfied with the safety facilities provided by the organization. But some modification are required in the field of recreation, Safety equipment's, over time payments, grievance handling etc. Betterment is requiring in the work of co-operative societies which runs by the trade union.

Okereke (2010) revealed that there complete absence of safety m safety among employees. Staffs were totally neglected by council. The working environment was poor or path. He informs of office accommodation & furniture working materials, monetary incentives & unreliable health of Safety facilities etc. Job satisfaction among employees are very low which leads to poor productivity or performance .Okereke suggested that significant efforts should be made to improve employee job capabilities through training.

III. MANUFACTURING INDUSTRY

A. Introduction

Manufacturing is the production of products for use or sale using labour and machines, tools, chemical and biological processing, or formulation. The term may refer to a range of human activity, from handicraft to high tech, but is most commonly applied to industrial design, in which raw materials are transformed into finished goods on a large scale. Such finished goods may be sold to

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other manufacturers for the production of other, more complex products, such as aircraft, household appliances, furniture, sports equipment or automobiles, or sold to wholesalers, who in turn sell them to retailers, who then sell them to end users and consumers. Manufacturing engineering or manufacturing process are the steps through which raw materials are transformed into a final product. The manufacturing process begins with the product design, and materials specification from which the product is made. These materials are then modified through manufacturing processes to become the required part.

Post-independence, Indian economy was heavily dependent on the agricultural sector. It contributed to more than 50% to the GDP. Over the years India gradually shifted from agriculture based economy to the service based economy. Many economists believe that skipping the secondary sector is the main reason as to why Indian economy has not developed as fast as other economies of the world. In recent years the manufacturing sector has been the major focus for the government of India. Realizing the importance of manufacturing sector and the amount of employment it can generate, many initiatives are being taken up by the current government to foster the growth of this sector. Having the benefit of a high amount of educated population & skilled labor, there is enough scope for the manufacturing sector to further develop in the country. The 'Make in India' campaign started by the current government is one of the biggest initiatives taken by any government in order to attract foreign investors to invest and start manufacturing in India. The government is providing adequate infrastructure like electricity and strong network of roads and railways for easy transportation of goods and services. Many laws favoring the labors and land acquisition are being implemented so that it is easier for the foreign investors to start their business in India. Their main motive is to manufacture goods with zero defects so that none of the exported goods are returned back to India. With 'Make in India' campaign, the government doesn't want to compromise on the environmental standards. They want to follow a sustainable and environmentally sensitive path to prosperity. Some of the major industries which are on a high rise are the automobile industry, electronic & semiconductor industries, machinery, chemical, pharmaceutical industries and aviation industries

B. Challenges

Logistic sector in India contributes to around 14% of the total GDP of the country, which is higher than USA and many European countries. For a developing economy such high share of GDP in logistic sector is deemed unhealthy. When we compare with BRIC nations, the ranking for other countries in the logistic sector index is constantly improving. According to the World Bank's 2014 logistics performance India is positioned at 54 much below than other countries like South Africa Customers' Shopping Handling & Warehousing Packaging Losses Inventories Transportation (34), Vietnam (48), and Chile (42). There are a plenty of reasons for the poor showing of India in this department. Poor networks of roads, inadequate air & sea port capacities along with undeveloped railway networks are hindering the growth of this sector. This leads to slow & amp; inefficient delivery of the product to the customers. The turnaround times are also high due to heavy congestion on berths and slow evacuation of cargo unloaded at berths. High cost of fuel & high waiting times negatively impact the logistic sector. The transportation industry is also severely unorganized. The employees of this sector have inadequate skills which lead to inefficient supply of goods. Low level of technology and poor maintenance of the tools are also responsible for inefficiency of the transportation industry. The warehouses are mostly run by small or medium players with small capacity therefore poor handling and management takes place.

C. Logistics & Transportation Sector

Logistic sector is the backbone of an economy. In India Most of the retail, automobile & pharmaceutical organizations outsource their logistics department to the third party logistics (3PL). It is one of the busiest sectors in the country. Annually there are 2.2 million heavy duty trucks and 0.6 million light duty trucks covering more than 18, 00,000 km of length.

D. Industrial & Freight Corridors

In the recent years, Indian market has seen a significant rise. Successful implementation and planning of various infrastructural projects has been the chief architect behind this growth. In order to sustain this growth and further develop the industrial sector, Indian government is setting up new industrial and freight corridors. In order to transfer goods in a faster and a more efficient way, India proposed a master plan linking all the major centers of production via roads and highways. The ministry of road, transport & highways came up with a project, linking four major cities (Delhi, Mumbai, Chennai and Kolkata) across different regions forming a quadrilateral. This project was termed as 'The Golden Quadrilateral'. More than 5,000 km of road & a total of 13 states are covered by this project. It has been one of the biggest success stories in the recent years as it has been highly beneficial for the growth of the Indian Economy. It has reduced the travel time between the major cities considerably and the goods are able to reach in lesser time. Due to better quality of roads, multi-axle trucks are being used to carry the goods which bring down the transportation cost.

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E. Process

Drilled holes are characterized by their sharp edge on the entrance side and the presence of burrs on the exit side (unless they have been removed). Also, the inside of the hole usually has helical feed marks. Drilling may affect the mechanical properties of the workplace by creating low residual stresses around the hole opening and a very thin layer of highly stressed and disturbed material on the newly formed surface. This causes the workplace to become more susceptible to corrosion and crack propagation at the stressed surface. A finish operation may be done to avoid these detrimental conditions. For fluted drill bits, any chips are removed via the flutes. Chips may form long spirals or small flakes, depending on the material, and process parameters. The type of chips formed can be an indicator of the machinability of the material, with long chips suggesting good material machinability. When possible drilled holes should be located perpendicular to the workplace surface. This minimizes the drill bit's tendency to "walk", that is, to be deflected from the intended center-line of the bore, causing the hole to be misplaced. The higher the length-to-diameter ratio of the drill bit, the greater the tendency to walk. The tendency to walk is also preempted in various other ways, which include:

1) Establishing a centering mark or feature before drilling, such as by:
2) Casting, molding, or forging a mark into the work place
3) Center punching
4) Spot drilling (i.e., center drilling)
5) Spot facing, which is machining a certain area on a casting or forging to establish an accurately located face on an otherwise rough surface?
6) Constraining the position of the drill bit using a drill jig with drill bushings

Surface finish produced by drilling may range from 32 to 500 micro inches. Finish cuts will generate surfaces near 32 micro inches, and roughing will be near 500 micro inches.

Cutting fluid is commonly used to cool the drill bit, increase tool life, increase speeds and feeds, increase the surface finish, and aid in ejecting chips. Application of these fluids is usually done by flooding the work place with coolant and lubricant or by applying a spray mist. In deciding which drill(s) to use it is important to consider the task at hand and evaluate which drill would best accomplish the task. There are a variety of drill styles that each serves a different purpose. The sub land drill is capable of drilling more than one diameter.

F. Drilling

Drilling is a cutting process that uses a drill bit to cut a hole of circular cross-section in solid materials. The drill bit is usually a rotary cutting tool, often multi-point. The bit is pressed against the work-piece and rotated at rates from hundreds to thousands of revolutions per minute. This forces the cutting edge against the work-piece, cutting off chips from the hole as it is drilled. In rock drilling, the hole is usually not made through a circular cutting motion, though the bit is usually rotated. Instead, the hole is usually made by hammering a drill bit into the hole with quickly repeated short movements. The hammering action can be performed from outside the whole (top-hammer drill) or within the hole (down- the-hole drill, DTH). Drills used for horizontal drilling are called drifter drills. In rare cases, specially-shaped bits are used to cut holes of non-circular cross-section; a square cross-section is possible.

1) *Deep Hole Drilling:* Deep hole drilling is defined as drilling a hole of depth greater than ten times the diameter of the hole. These types of holes require special equipment to maintain the straightness and tolerances. Other considerations are roundness and surface finish. Deep hole drilling is generally achievable with a few tooling methods, usually gun drilling or BTA drilling. These are differentiated due to the coolant entry method (internal or external) and chip removal method (internal or external). Using methods such as a rotating tool and counter-rotating workplace are common techniques to achieve required straightness tolerances. Secondary tooling methods include trepanning, skiving and burnishing, pull boring, or bottle boring. Finally, a new kind of drilling technology is available to face this issue: vibration drilling. This technology breaks up the chips by a small controlled axial vibration of the drill. The small chips are easily removed by the flutes of the drill.A high tech monitoring system is used to control force, torque, vibrations, and acoustic emission. Vibration is considered a major defect in deep hole drilling which can often cause the drill to break. A special coolant is usually used to aid in this type of drilling.
2) *Gun Drilling:* Gun drilling was originally developed to drill out gun barrels and is used commonly for drilling smaller diameter deep holes. The depth-to-diameter ratio can be even greater than 300:1. The key feature of gun drilling is that the bits are self-centering; this is what allows for such deep accurate holes. The bits use a rotary motion similar to a twist drill; however, the bits are designed with bearing pads that slide along the surface of the hole keeping the drill bit on center. Gun drilling is usually done at high speeds and low feed rates.

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3) *Spot Drilling:* The purpose of spot drilling is to drill a hole that will act as a guide for drilling the final hole. The hole is only drilled part way into the work place because it is only used to guide the beginning of the next drilling process.
4) *Drilling in Metal:* Under normal usage, swarf is carried up and away from the tip of the drill bit by the fluting of the drill bit. The cutting edges produce more chips which continue the movement of the chips outwards from the hole. This is successful until the chips pack too tightly, either because of deeper than normal holes or insufficient backing off (removing the drill slightly or totally from the hole while drilling). Cutting fluid is sometimes used to ease this problem and to prolong the tool's life by cooling and lubricating the tip and chip flow. Coolant may be introduced via holes through the drill shank, which is common when using a gun drill. When cutting aluminum in particular, cutting fluid helps ensure a smooth and accurate hole while preventing the metal from grabbing the drill bit in the process of drilling the hole. When cutting brass, and other soft metals that can grab the drill bit and causes "chatter", a face of approx. 1-2 millimeters can be ground on the cutting edge to create an obtuse angle of 91 to 93 degrees. This prevents "chatter" during which the drill tears rather than cuts the metal. However, with that shape of bit cutting edge, the drill is pushing the metal away, rather than grabbing the metal. This creates high friction and very hot swarf.

IV. COMPANY PROFILE

A. *Introduction*

Sai Deepa is a leading global provider of rock drilling tools for construction, mining, water well and Oil & Gas segments. Sai Deepa develops world-class products using efficient raw materials and cutting edge manufacturing technology. Combining a unique and flexible delivery model with customer satisfaction, they cater to any crucial and trivial requirements of our clients.

Sai Deepa has world-class, state-of-the-art infrastructure that provides a wide range of drilling products at highly competitive terms making it the leading rock drilling tools manufacturer in India. Their strength lies in their employees who follow the core company principles of customer service, team play and mutual respect. With their help, Sai Deepa has continued to raise the bar in making state-of-the-art and technologically advanced rock drilling tools. They are committed to consistently develop, manufacture and distribute, top quality rock drilling tools which result into lower cost per meter drilled.



Fig No: 1 showing the manufacturing unit of Sai Deepa Rock Drilling Tools

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1) *Vision:* Sai Deepa Rock Drills vision is to provide our customers with Sustainable Solutions. To achieve our vision, we have to work in close cooperation with our customers and develop deep understanding of end user processes.
2) *Mission:* Sai Deepa is committed to continually develop, manufacture and distribute the best quality, most economical rock drilling tools for mining, construction & water well segments, and provides the best possible value for its main stakeholders – customers, shareholders and employees. These tools are designed to transmit optimum impact energy into the rock with the least possible loss of energy, and are made to handle the toughest jobs around the globe. We plan to achieve market leadership through set of principles that guide decisions and behavior throughout the company.
3) *Core Values*

a) Customer Success
b) Team Play
c) Mutual Respect
d) The Truth – Realistic Goals
e) Sai Deepa's Integrity
f) Creativity
g) Delivery
h) Commitment
i) Experience

B. People Are Their Strength

They strongly believe that our strength lies in our people. People are our main assets and it is they who ensure our success time and again. Success demands that they continuously raise the bar of our collective performance. Toward this, they aim to facilitate environment that will motivate our associates and translate into superior levels of performance. They believe in continuous education of our associates and strive to provide the best training facilities that will keep us on par with the best professionals in our field. They strive to provide a climate that nurtures the holistic development of our associates.

1) *Sai Deepa Rock Drilling Tools Certified With*

a) ISO 27001- INFORMATIONSECURITY
b) ISO-9001 QUALITYMANAGEMENT
c) ISO 14001-ENVIRONMENT
d) ISO 45001-OSHAS



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2) Products

a) Rock Drilling Tools
b) Hydraulic cylinder parts
c) Hydraulic breaker parts
d) Crusher parts
e) Under carriage parts

3) *Down the hole Rock Drilling Tools:* Sai deepa is a leader in design, manufacture, servicing and repair of Down-the-Hole (DTH) percussive rock drilling products. We offer market's most comprehensive range of DTH hammers and button bits. DTH product solutions are for water well, mining and as well as for contractors in construction.

4) Sai Deepa's DTH Products Include

a) Down the Hole hammers (2 - 12 inches diameter)
b) Down the Hole over burden drilling systems (4 3/4 - 12inches)
c) Frictional Welded and Induction hardened Drill Pipes and Adaptors All thread types, male and female Excellent wear resistance and longer life.

C. DTH Bits

1) Identification chart
2) SD Bits
3) Panther Bits
4) BR Bits
5) Mach Bits
6) DHD Bits
7) QL Bits
8) RK Bits
9) Other Bits Series
10) Operation and Maintenance

D. DTH Hammer Series

1) UDC Series
2) JDC Series
3) JDM Series
4) DMD Series
5) FDH Series
6) Winner Series
7) Stunner Series

E. DTH Accessories

1) DRT Series
2) DTH Hammers maintenance
3) DTH ODEX
4) DTH Adapters
5) DTH Drill Pipes

F. Features & Benefits

1) Time tested and proved
2) Low on fuel High on penetration
3) Designed for maximum performance in low pressure operations
4) Rugged and Reliable

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G. Top Hammer Rock Drilling Tools

Each project needs to achieve the best possible operating costs and outcome for business. Complex rock formations and difficult terrain can be a real challenge for any driller. With a range of solutions and high quality, durable top hammer drilling tools, Sai deepa partners with you to succeed in reaching optimal project outcomes. Sai deepa top hammer rock drilling tools have been specially designed for hard to very hard and abrasive rock formations. Our bits have shown increase in penetration rate and also a substantially longer service life.

1) Sai Deepa's Top hammer products include:
a) Taper rods and bits
b) Complete range of threaded button bits
c) Drifter rods and extension rods
d) Coupling and reduction sleeves
e) Shank adaptors suitable to all hydraulic drifters.

2) *Forging Solutions:* Sai deepa is a leading supplier of closed and open die forging products for Rock drilling tools, hydraulic breaker parts, supplier for forged hydraulic cylinder parts to well-known manufacturers like Wipro India and Brazil. We are known for fair and open dialogue with clients and suppliers. Our strong presence in the above segments is guaranteed by innovative light weight solutions with application of advanced materials and optimized product design. Customer satisfaction remains our top priority. The company's product line, engineering design, metal working, Heat Treatment and machine centers supply fully ready to use machined forgings to required dimensions.

H. (IMS) Policy

They provide complete rock drilling solutions and strive to carve a niche for ourselves in this field. They value their customers, employees, and environment and treat informationas an asset.

They are committed to

1) Delight the customer
2) Prevent work related injuries & ill health
3) Protect the environment
4) Secure the information that is vital to our business continuity
5) Comply with the applicable legal and other requirements

In line with our organizational context and strategic direction, we strive to continually improve the performance of our IMS leading to long term sustainability.

V. DATA ANALYSIS AND INTERPRETATION

A. To know about the hierarchy of workplace hazards at sai deepa.

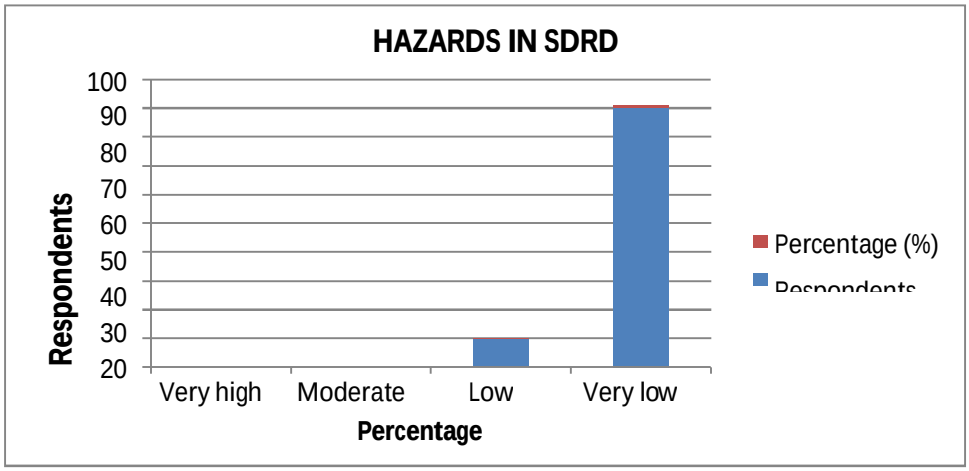
1) What is the hierarchy of hazards in SDRD.

Table No 1: Hierarchy of hazards

Particulars	Respondents	Percentage (%)
Very high	0	0%
Moderate	0	0%
Low	10	10%
Very low	90	90%

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Fig No 1: Graphical representation of Hierarchy of hazards in SDRD



2) Interpretation

a) From the above table it is inferred that 10% of respondents said that no hazard happen in the organization by practical experience.

b) 90% said as no hazard happen in the organization Safety measures as they are engaged with work

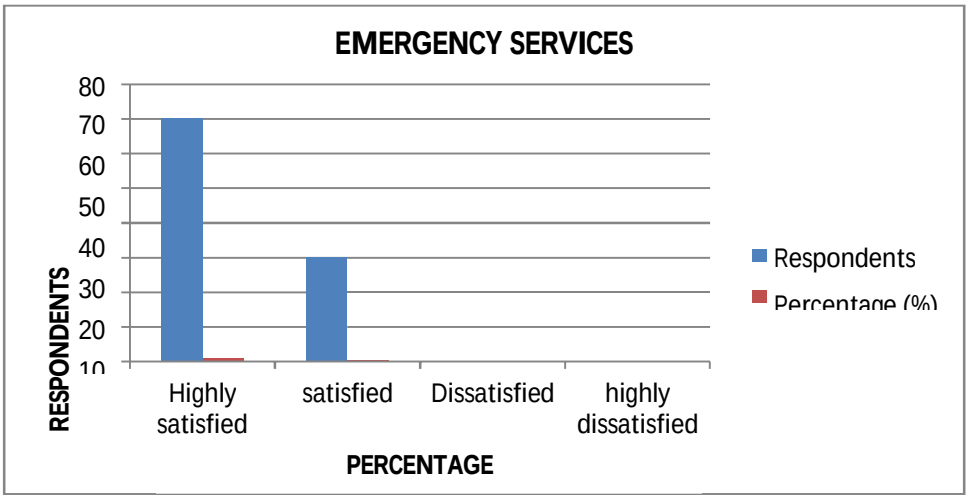
B. To Know About The Level Of Emergency Services Provided By Sai Deepa

1) Are you satisfied with the emergency services provided by your organization.

Table No 2: Emergency services provided by your organization

Particulars	Respondents	Percentage (%)
Highly satisfied	70	70%
satisfied	30	30%
Dissatisfied	0	0%
highly dissatisfied	0	0%

Fig No 2: Graphical representations of Emergency services provided by your organization



2) Interpretation

a) From the above table it is inferred that 70% of respondents said that Highly satisfied with the emergency services provided by your organization,

b) 30% of respondents said that highly satisfied with the emergency services provided by your organization show interest to know more about Safety as they are engaged with work.

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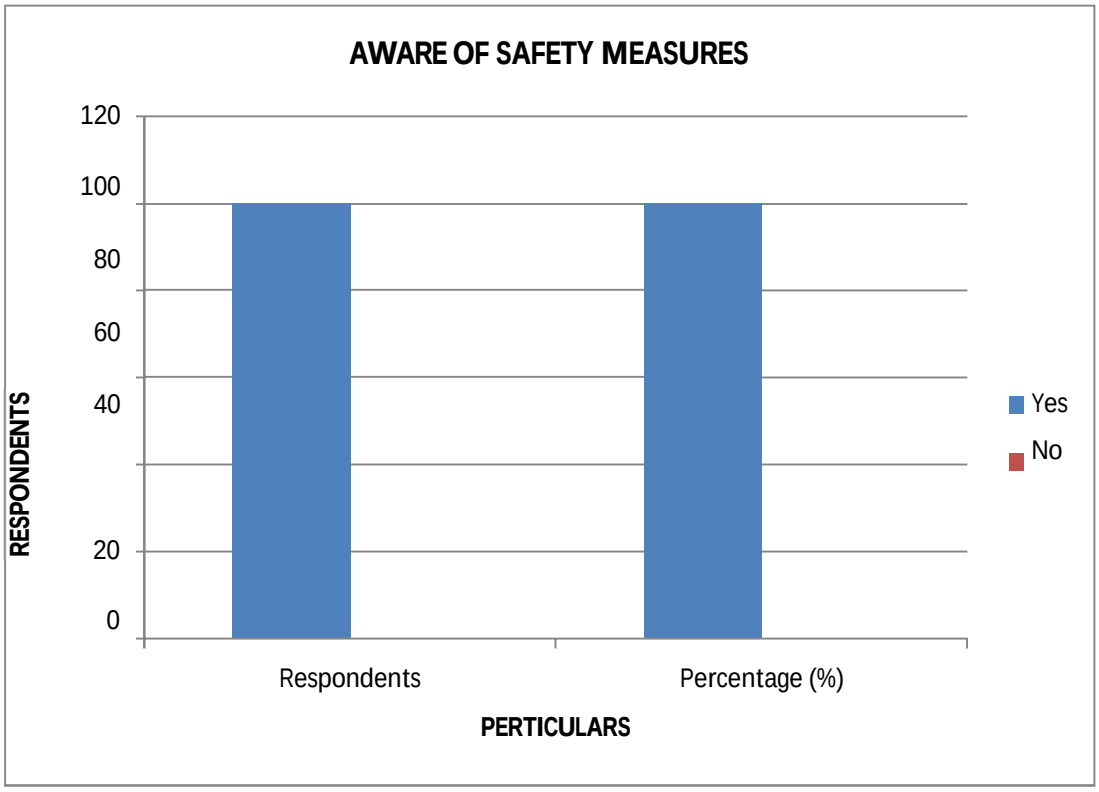
C. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

1) Are you aware of the Safety measures adopted in the company SDRD.

Table No 3: Employees aware of the safety measures.

Particulars	Respondents	Percentage (%)
Yes	100	100
No	0	0%

Fig No 3 : Graphical representation of Safety measures adopted in the company SDRD



2) Interpretation: From the above table it is referred that 100% of employees felt that aware of the Safety measures at Sai Deepa Rock Drilling tolls because organization is surrounded by greenery, with Safety equipment's.

D. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

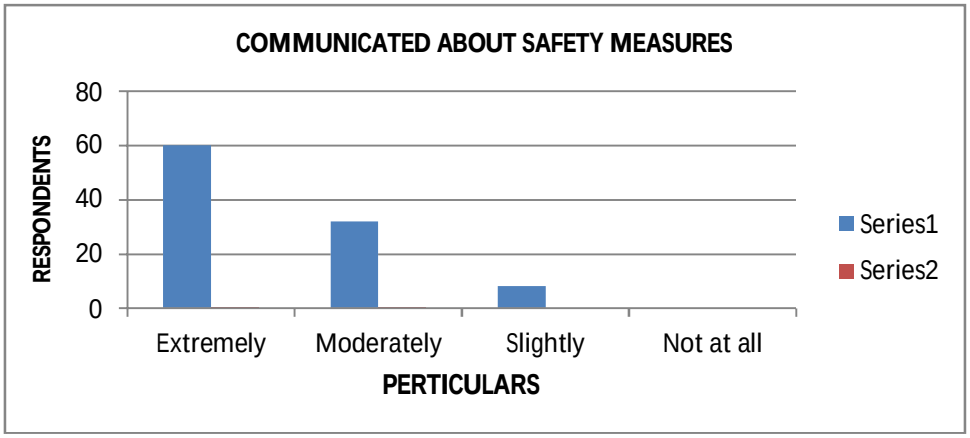
1) Have you been effectively communicated about Safety measures in SDRD.

Table No 4: Employees effectively communicated about Safety measures

Particulars	Respondents	Percentage (%)
Highly satisfied	60	60%
satisfied	32	32%
Dissatisfied	8	8%
highly dissatisfied	0	0%

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Fig No 4: Graphical representation of effectively communicated about Safety measures



2) Interpretation

a) From the above table it is inferred that 60% of respondents said that they have been effectively communicated about Safety and Safety measures by giving clarity on queries and by practical experience.

b) 32% said as moderately because they did not show interest to know more about Safety measures as they are engaged with work.

c) Only 8% said that slightly communicated about the safety measures.

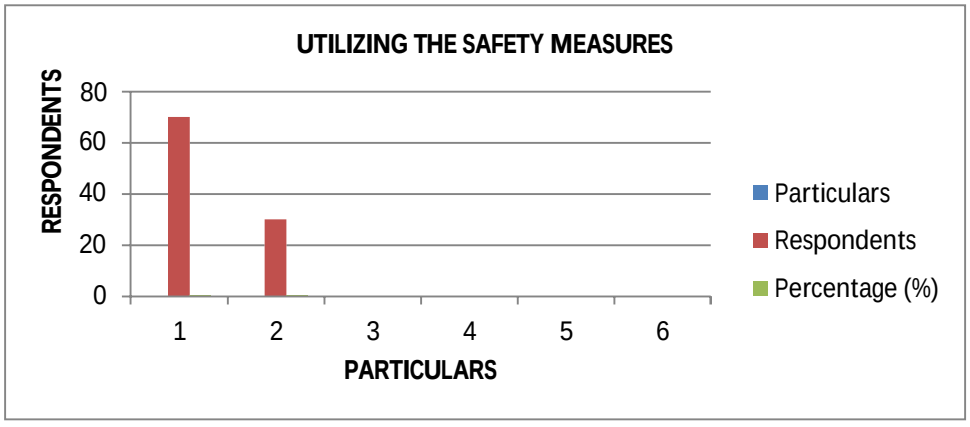
E. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

1) Are you effectively utilizing the Safety measures provided by organization

Table No 5: effectively utilizing the Safety measures

Particulars	Respondents	Percentage (%)
Highly satisfied	70	70%
satisfied	30	30%
Dissatisfied	0	0%
highly dissatisfied	0	0%

Fig No 5: Graphical representation of effectively utilizing the Safety measures



2) Interpretation

a) From the above table it is inferred that70% very effectively utilizing the Safety measures provided by organization.

b) 30% slightly effective utilizing the Safety measures provided by organization.

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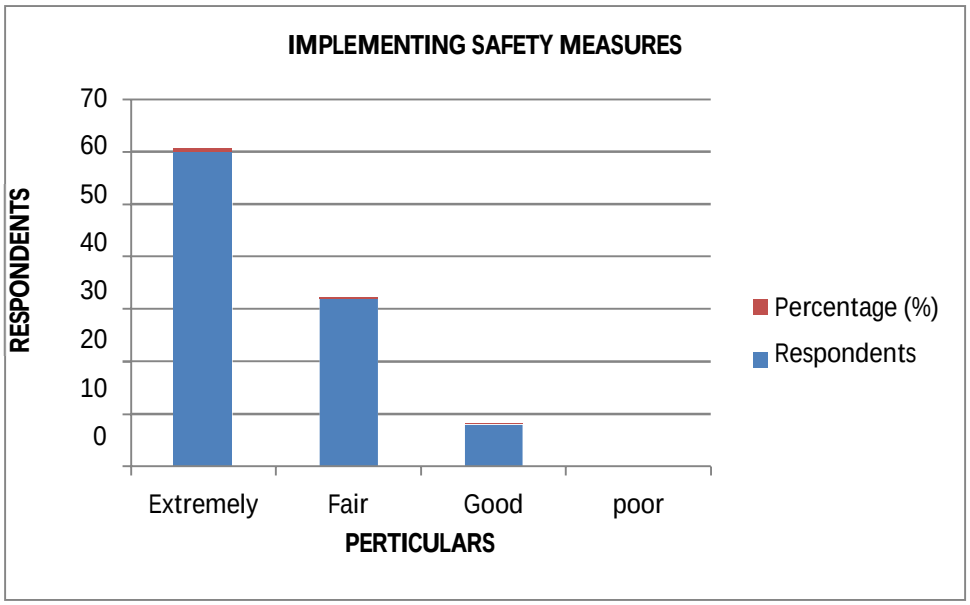
F. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

1) The role of management in implementing Safety measures.

Table No 6: Role of management in implementing Safety measures

Particulars	Respondents	Percentage (%)
Extremely	60	60%
Fair	32	32%
Good	8	8%
poor	0	0%

Fig No 6: Graphical representation of the role of management in implementing Safety measures



2) Interpretation

a) From the above table it is inferred as 60% of employees are extremely satisfied with this implementing Safety measures.

b) 32% respondents said fair because of their high expectation.

c) Only 8% said as good as they were not sure.

G. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

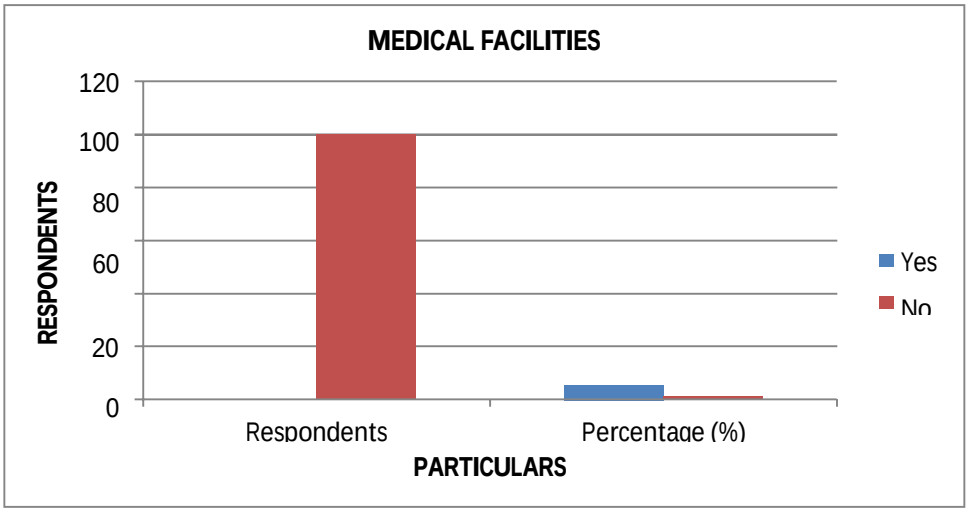
1) Do you face any problems in availing medical facilities

Table No 7: problems in availing medical facilities

Particulars	Respondents	Percentage (%)
Yes	0	0%
No	100	100%

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Fig No 7: Graphical representations of any problems in availing medical facilities



2) *Interpretation:* From the above table it is inferred as 100% of employees are extremely no face any problems in availing medical facilities in the organization.

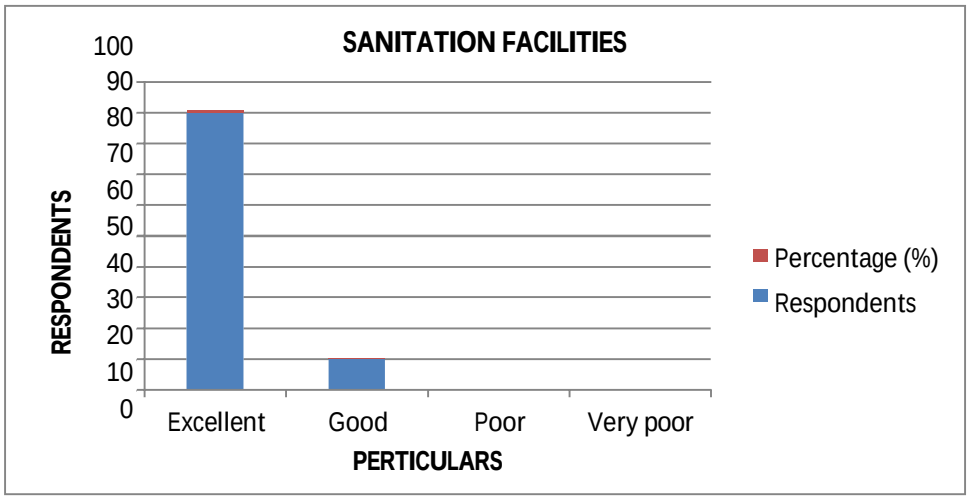
H. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

1) How do you rate the sanitation facilities provided by the organization .

Table N0 8: Rate the sanitation facilities provided by the organization

Particulars	Respondents	Percentage (%)
Excellent	90	90%
Good	10	10%
Poor	0	0%
Very poor	0	0%

Fig No 8: Graphical representation of Rate the sanitation facilities provided by the organization



2) *Interpretation*

a) From the above table it is inferred that 60% of employees are very much satisfied with the Safety and safety measure provided by the organization as they concentrate more about employee's wellbeing

b) Rest 40% of employees are satisfied with Safety measures due to high expectation in benefits.

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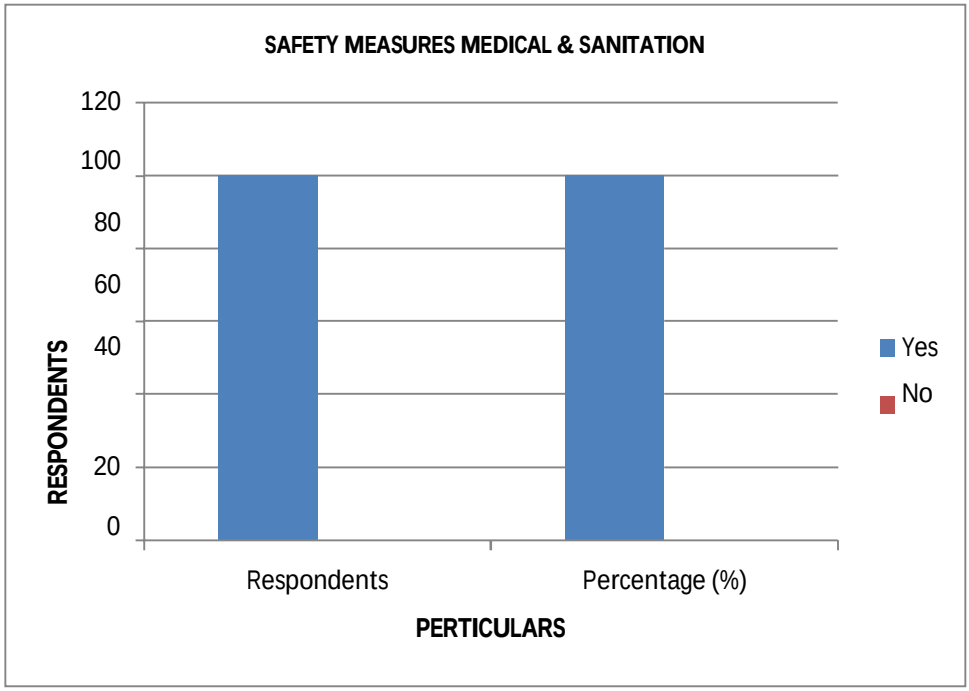
I. To Know About Statutory Safety Measures Provided By The Company At Work Place At Sai Deepa

1) Do women employees will get any additional Safety measures medical & sanitation

Table No 9: Additional Safety measures medical & sanitation

Particulars	Respondents	Percentage (%)
Yes	100	100%
No	0	0%

Fig No 9: Graphical representation women employees will get any additional Safety measures medical & sanitation



2) Interpretation

a) From the above table it is referred that 100% of employees felt that additional Safety measures medical & sanitation because organization is Safety equipment's.

J. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

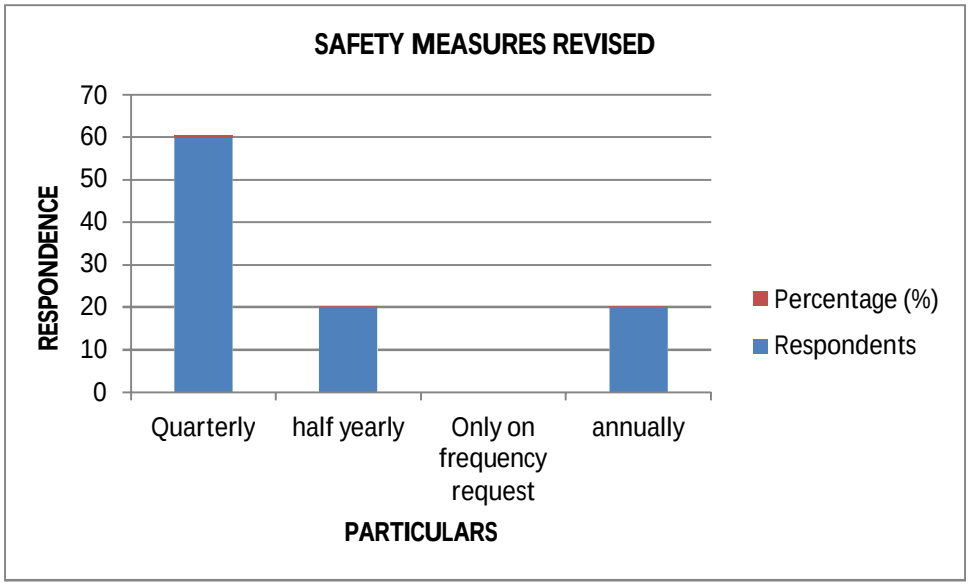
1) How Often The Safety Measures Revised

Table No10: Safety measures revised

Particulars	Respondents	Percentage (%)
Quarterly	60	60%
half yearly	20	20%
Only on frequency request	0	0%
annually	20	20%

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Fig No10: Graphical representations of Safety measures revised



2) Interpretation

a) From the above table it is inferred that 60% of employee's said that Quarterly revised Safety measures

b) 20% of employee's said that Quarterly revised Safety provided by the company

c) 20% employee's said that annually revised Safety provided by the company for some employees.

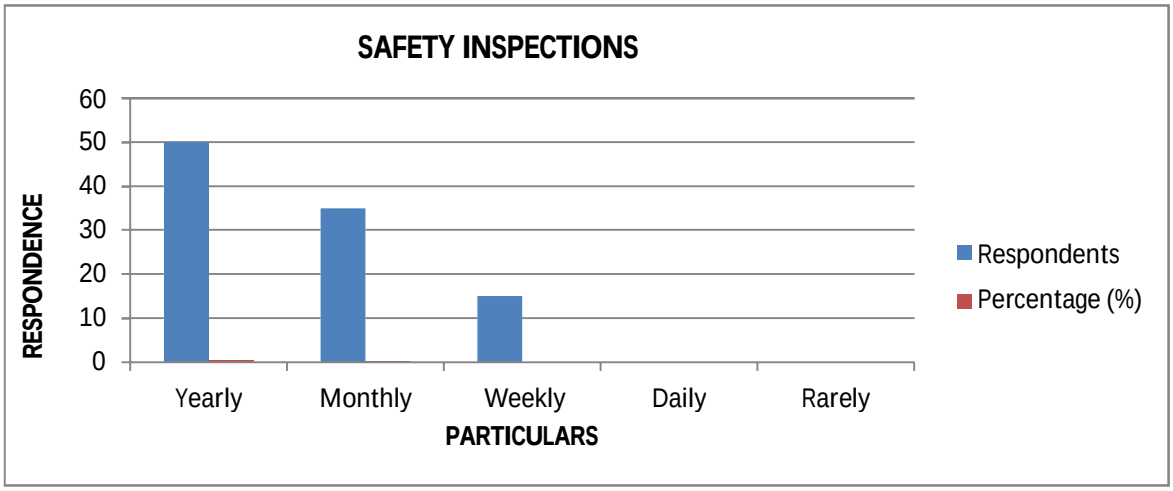
K. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) How often the Safety inspections are held in your company.

Table No 11: Safety inspections

Particulars	Respondents	Percentage (%)
Yearly	50	50%
Monthly	35	35%
Weekly	15	15%
Daily	0	0%
Rarely	0	0%

Fig No11: Graphical representation of Safety inspections are held in your company



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2) Interpretation

a) From the above table it is inferred that 50% of employees say that Yearly Safety inspections are held in your company they get chance to Safety inspections.

b) 35% of the employees feel that monthly Safety inspections are held in your company

c) Only 15% of employees said that weekly Safety inspections are held in your company.

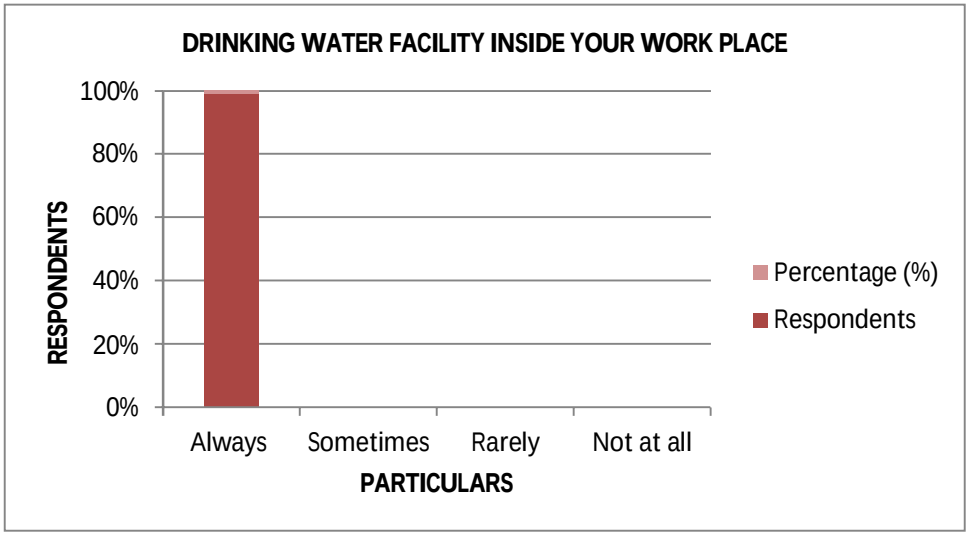
L. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) Do you have proper drinking water facility inside your work place.

Table No 12: Drinking water facility inside your work place

Particulars	Respondents	Percentage (%)
Always	100	100%
Sometimes	0	0%
Rarely	0	0%
Not at all	0	0%

Fig No: 12: Graphical representation of Drinking water facility inside your work place



2) Interpretation: From the above table it is referred that 100% of employees felt that they have proper drinking water facility inside your work place. Because of health of the employees Safety.

M. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

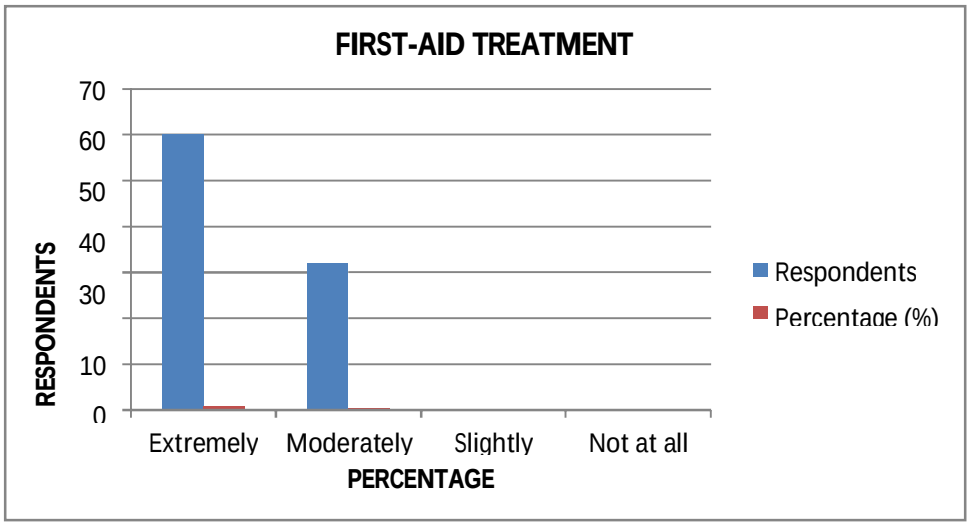
1) To what extent you are aware of First-Aid treatment of various elements in SDRD.

Table No13: First-Aid treatment of various Elements

Particulars	Respondents	Percentage (%)
Extremely	60	60%
Moderately	32	32%
Slightly	0	0%
Not at all	0	0%

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Fig No 13: Graphical representation of First-Aid treatment of various Elements



2) Interpretation

a) From the above table it is inferred that 60% of respondents said that they you are aware of First-Aid treatment of various elements in SDRD.

b) 32% said that slightly they you are aware of First-Aid treatment of various elements in SDRD and

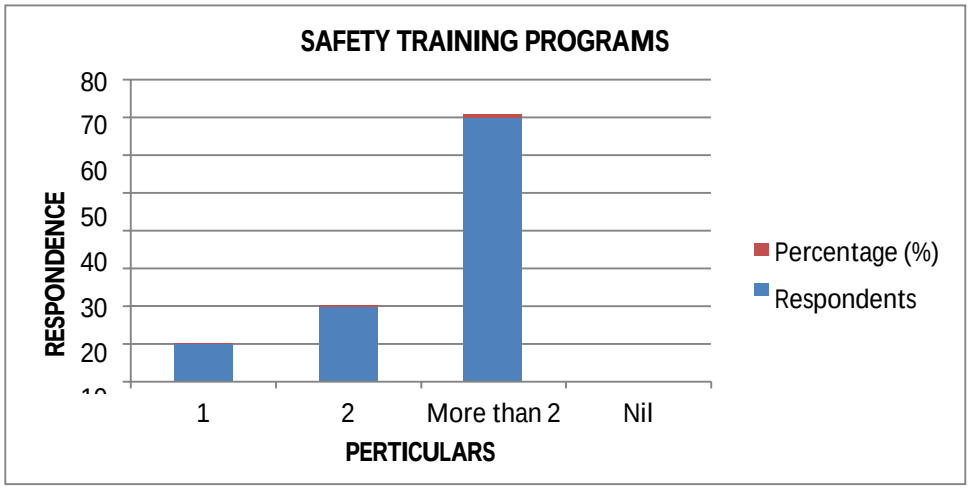
N. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) How many Safety training programs attended by you in the current year.

Table No 14: Safety training programs attended by you in the current year

Particulars	Respondents	Percentage (%)
1	10	10%
2	20	20%
More than 2	70	70%
Nil	0	0

Fig No 14: Graphical representations of safety training programs attended by you in the current year



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2) Interpretation

a) From the above table it is inferred 10% of employees Safety training programs attended.

b) 20% of employees Safety training programs attended in the organization.

c) 70%of employees Safety training programs attended Safety training programs attended by you in the current year

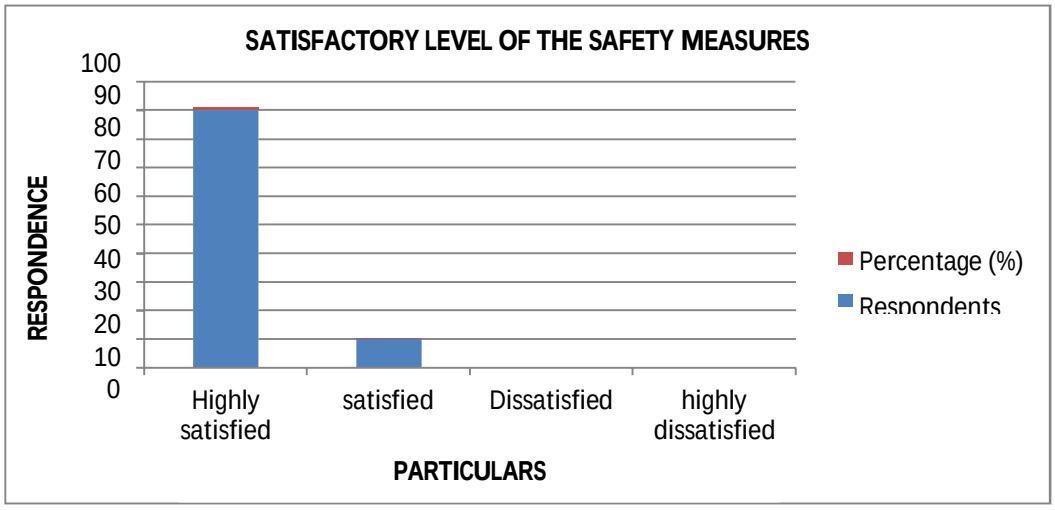
O. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) Satisfactory level of the Safety measures taken by the company.

Table No 15: satisfactory level of the Safety measures by your organization

Particulars	Respondents	Percentage (%)
Highly satisfied	90	90%
satisfied	10	10%
Dissatisfied	0	0%
highly dissatisfied	0	0%

Fig No 15: Graphical representation of satisfactory level of the Safety measures taken by the company



2) Interpretation

a) From the above table it is inferred as 90% of employees are highly satisfied with this level of the Safety measures taken by the company.

b) Only10% respondents said satisfied because of their high expectation.

P. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

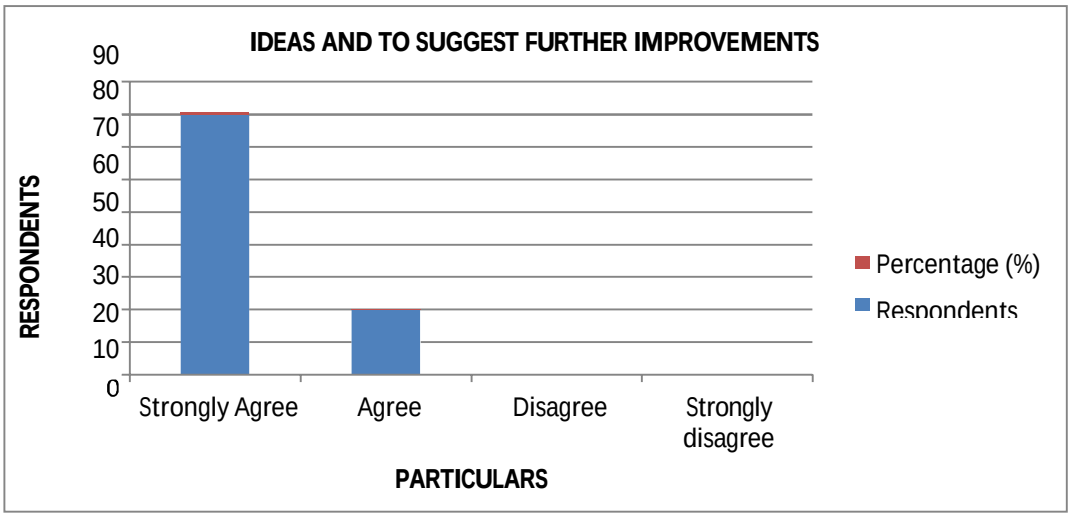
1) Do you find the platform to express your ideas and to suggest further improvements for your betterment of your organization.

Table No 16: platform to express your ideas and to suggest further improvements

Particulars	Respondents	Percentage (%)
Strongly Agree	80	80%
Agree	20	20%
Disagree	0	0%
Strongly disagree	0	0%

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Fig No 16: Graphical representation of platform to express your ideas and to suggest further improvements



2) Interpretation

a) From the above table it is inferred that 80% of employees say that they get chance to express their ideas to the committee.

b) 20% of the employees feel that they get chance moderately to express their views as much of the time employees will be engaged in the work.

c) And remaining 1% employee says low as he/she is a new joiner.

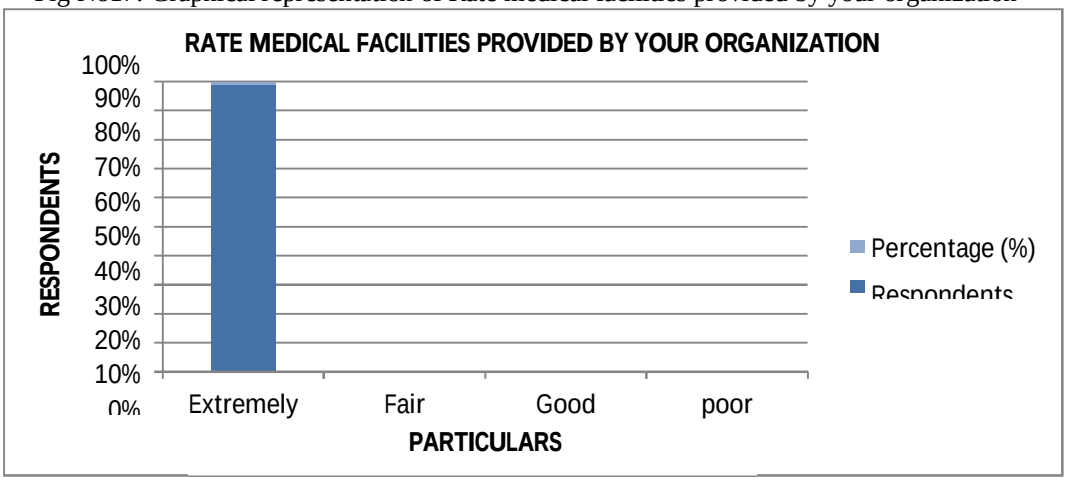
Q. To Understand The Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) How do you rate medical facilities provided by your organization.

Table No17: Medical facilities provided by your organization

Particulars	Respondents	Percentage (%)
Extremely	100	100%
Fair	0	0%
Good	0	0%
poor	0	0%

Fig No17: Graphical representation of Rate medical facilities provided by your organization



2) Interpretation: From the above table it is inferred as 100% of employees are extremely satisfied rate medical facilities provided by your organization with this implementing Safety measures, because of their high expectation.

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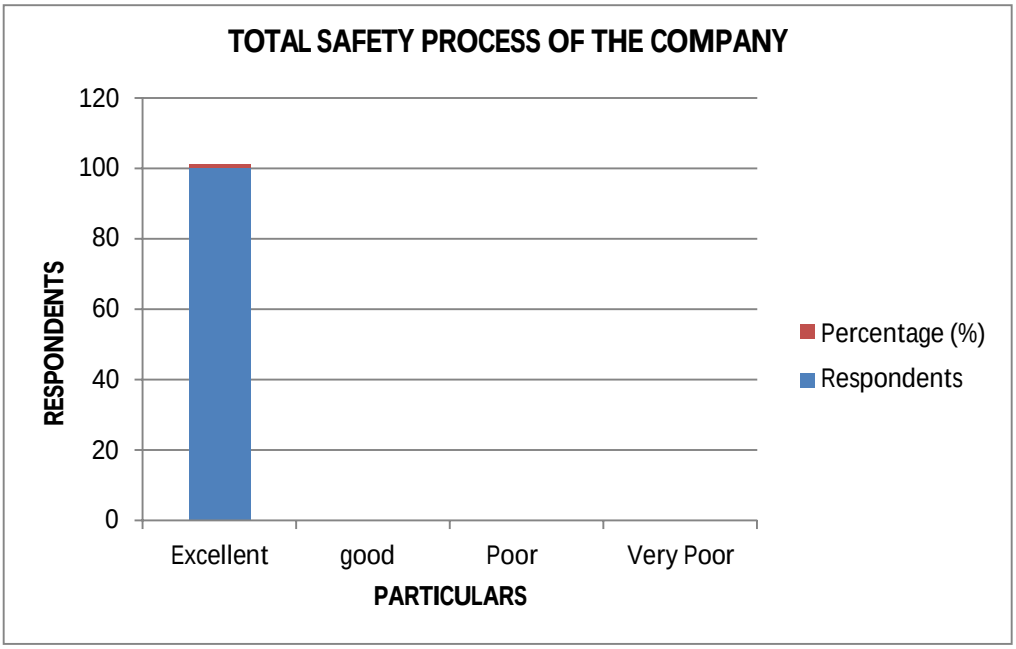
R. To Understand the Satisfaction Levels Of The Employees By Safe And Secure Environment At Sai Deepa, Which Leads To The Higher Productivity

1) Rate the total Safety process of the company.

Table No 18: Safety process of the company

Particulars	Respondents	Percentage (%)
Excellent	100	100%
good	0	0%
Poor	0	0%
Very Poor	0	0%

Fig No18: Graphical representation of total Safety process of the company



2) Interpretation: From the above table it is referred that 100% of employees felt that excellent Safety process of the company.

VI. FINDINGS, SUGGESTIONS AND CONCLUSION

A. Findings

1) 100% of employees in the organization are fully aware of Safety provided by Sai Deepa Rock Drilling Tools. Here the management thinks all the way about employee wellbeing and also mention that people are their strength.

2) It is observed for second objective is that employees are effectively communicated about Safety measures, employees are very much satisfied Safety measure.

3) Nearly 60% of employees are satisfied about Safety measures provided by organization, as they think organization is very much concerned about their wellbeing by providing important and basic necessary benefits and creating the healthy environment, remaining 40% felt good because of unrelated scheme available for employees, work load and no proper creation.

4) 100% employees said that they do not face any problems in medical facilities providing by the Sai Deepa Company.

5) Safety are revised every year, inspection is held every day to reduce accident's and management seeks that employee will not suffer in availing the benefits. Directly this gives the confident to employee that management is supporting them and encourages employee to give more productivity through work.

6) Organization is playing a crucial role by providing training and communicating about Safety related issues. Employees became capable of handling in case of accident.

7) 100% of employees give highly satisfied with overall rating to the company SDRD.

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8) Safety training programmes are organized very well in the organization. Each and every employee is satisfied with the same.
9) They are extremely satisfied with utilizing the safety measures provided by organization.
10) 90% of employees are highly satisfied with the safety measures taken by the company only 10% of employees just satisfied.
11) Here management 60% of employees extremely satisfied with the implementing safety measures only 8% of employees said that good.
12) 80% Employees said that they got a platform to express their ideas and suggest for the betterment of your organization. only 20% of people agree they are recently joined.
13) 100% of employees extremely satisfied with the medical facilities provided by your organization.
14) Sai deepa provided 100% employees said that they have proper drinking facilities inside the work place.
15) Reason behind dissatisfaction of few employees is that management is very strict due to security reasons.
16) 100% employees satisfied by providing sanitation & medical at SDRD.

B. Suggestions

1) All the employees are totally communicated about Safety; management should provide more practical classes about Safety by giving some kind of situations to them to improve effective utilization and also through word of mouth.
2) The company has a satisfying response for providing basic needs like rest room, shoes and drinking water for their workers. The company should hold this status in future.
3) Employees feel good regarding the work environment and it could be maintained.
4) The employees and the superior relationship should be closure, only then, the highest objective is achieved..
5) Platform to express employee's ideas and opinions should be well designed for a better employee-employer relationship.
6) By gathering the information from the committee of Safety, Organization should take necessary steps to avoid further complications.

C. Conclusion

A majority of the respondents feel secure while working at Sai Deepa Rock Drilling Tools and feel that the Safety measures help to reduce the accidents. The study again shows that there is a clustering of respondent's opinion in the satisfactory region regarding the level of Safety. The management may take up steps to convert these into highly satisfactory. The few Employee Safety is advocated to maintain and strengthen manpower both physically and mentally. The study of various safeties brings in to light that the present measures taken by the company, and Safety brings out the light that management is very bothered about employee Safety. And finally the level of satisfaction is high in most of the cases; hence this proves that management is really striving hard to protect the strength. This concern towards employees builds the morale and increase the productivity of the employees and acts as a motivational factor.

D. Questionnaire

I S. Pavan Kumar a student of Anurag Groups of Institution as a part of my course curriculum we are doing a project on "A study on employee Safety measures at Sai Deepa rock drilling tools". I request you to fill the questionnaire.

Name: Age:
Education: Designation:

1) What is the hierarchy of hazards in SDRD? (a)Very high [ ] (b) Moderate [ ] (c) Low [ ] (d) Very low [ ]
2) Are you satisfied with the emergency services provided by your organization? (a)Highly satisfied (b) satisfied (c) Dissatisfied (d) highly dissatisfied
3) Are you aware of the Safety measures adopted in the company SDRD? (a)Yes [ ] (b) No [ ]
4) Have you been effectively communicated about Safety measures in SDRD? (a)Highly satisfied (b) satisfied (c) Dissatisfied (d) highly dissatisfied
5) Are you effectively utilizing the Safety measures provided by organization? (a) Yes[ ] (b) No [ ]
6) The role of management in implementing Safety measures? (e) Excellent [ ] (b) Fair [ ] (d) Good [ ] (d) Poor [ ]
7) Do you face any problems in availing medical facilities?(a) Yes[ ] (b) No [ ]
8) How do you rate the sanitation facilities provided by the organization? a) Excellent b) good c) Poor d) Very Poor

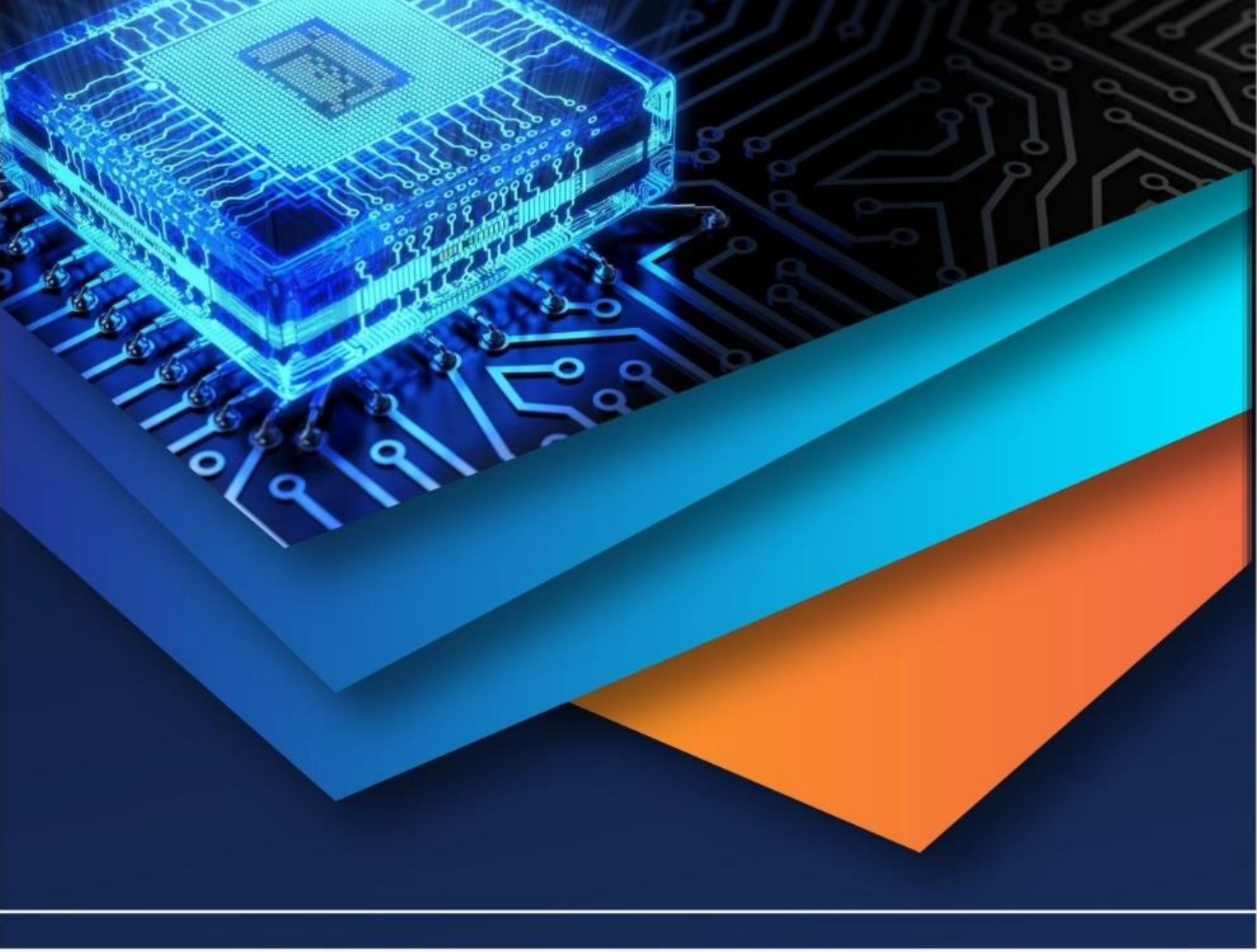
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9) Do women employees will get any additional Safety measures medical & sanitation? (a) Yes (b) No
10) How Often the Safety measures revised? (a) Quarterly [ ] (b) Half yearly (c) Only on frequency request (d) Annually
11) How often the Safety inspections are held in your company? (a)Yearly [ ] (b) Monthly [ ] (c) Weekly [ ](d) Daily [ ] (e) Rarely [ ]
12) Do you have proper drinking water facility inside your work place? (a) Always (b) Sometimes (c) Often (d) Rarely (e) Not at all
13) To what extent you are aware of First-Aid treatment of various ailments in SDRD? (a)Extremely aware [ ] (b) Moderately aware [ ](b) Slightly aware [ ](d) Not at all aware[
14) How many Safety training programs attended by you in the current year? (a) 1 (b) 2 (c) More than 2 (d) Nil
15) Satisfactory level of the Safety measures taken by the company? (a)Highly satisfied [ ] (b) Satisfied [ ] (c) Dissatisfied [ ] (d) Highly Dissatisfied [ ]
16) Do you find the platform to express your ideas and to suggest further improvements for your betterment of your organization? (a)Strongly agree [ ] (b) Agree [ ] (c) Disagree [ ] (d) Strongly Disagree [ ]
17) How do you rate medical facilities provided by your organization? a) Excellent b) good c) Poor d) Very Poor
18) Rate the total Safety process of the company? a)Excellent b) good c) Poor d) Very Poor

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