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Job Safety Analysis Beam Fabrication And Ironing Activities At Santika Hotel Development Project – Sukabumi City

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ABSTRACT

Accidents at work are a problem in Indonesia, especially in West Java. One of the jobs that has a high risk is the activity of fabricating and ironing beams. This work is structural work which is located on a critical path. The aim is to identify each stage of work up to OSH risk control in beam fabrication and ironing activities in the Santika – Nagrak Hotel Development project in Sukabumi Regency. The method in this study is qualitative by using interview techniques. The interview technique uses three informants, namely key informants, key informants and supporting informants. The data analysis used is the Miles and Hiberman method. The results of the data show that iron fabrication and beam ironing have a high risk of accidents and accidents have occurred, namely the risk of being pinched, falling from a height and being scratched. Meanwhile, the control measures undertaken by management are the provision of PPE, sockets equipped with lids or housings, carrying out routine checklists, conducting inductions for new workers, morning briefings and always reminding them of the applicable SOPs. OCCUPATIONAL HEALTH risk control in beam fabrication and procurement activities has been carried out by management so that workers remain safe at work.

Keywords: HIRARC, risk analysis, fabrication and beam fixing.

INTRODUCE

Industrial development is growing rapidly. This development has both positive and negative impacts. One of the positive impacts is the opening of job opportunities, increasing national income and a higher standard of living. Meanwhile, the negative impact is environmental pollution and increasing cases of work accidents. The industry that has a high risk of accidents is construction services because workers are directly in contact with heavy, sharp and electrical objects and in their work construction services are subject to targets or deadlines. Currently, every construction project is required to implement OCCUPATIONAL HEALTH (Occupational Safety and Health), but its implementation is still not optimal.

According to the ILO / WHO Joint Safety and Health Committee, Occupational Safety and Health (OCCUPATIONAL HEALTH) is the promotion and improvement of the physical, mental and welfare level of each job, preventing work from Occupational Diseases (PAK), protecting workers from risks and factors - factors that can disrupt health, placing and managing workers to adapt to their environment and to facilitate workers' adaptation to their respective jobs.

Occupational Health and Safety needs to be implemented because according to Law no. 1 of 1970 Regarding Occupational Health and Safety, every worker has the right to receive safety protection in carrying out work for welfare and increasing national production and productivity.

According to Minister of Manpower and Transmigration Regulation No. PER. 01/MEN/1980 concerning Occupational Health and Safety in building construction, with

increasing development using modern technology, it must also be balanced with efforts to ensure the safety of workers or other people in the workplace.

Based on the Social Security Administration Agency (BPJS), Employment recorded that in 2017 the number of work accidents reported reached 123,041 cases, while throughout 2018 there were 173,105 cases with claims for Work Accident Insurance (JKK) amounting to IDR 1.2 trillion. In 2019 there were 114,000 cases and there was an increase in cases of 55.2% to 177,000 cases in 2020. Then, from January to September 2021, there were 82,000 cases of work accidents and 179 cases of work illnesses, 65% of which were caused by Covid 19. Meanwhile, based on region , the largest work accident insurance claim was from the West Java region, namely 13,394 cases or 18.26% of the total national JKK which reached 73,366 cases.

Then followed by East Java with JKK claims of 12,994 cases or around 17.71 percent of the total national claims. And the third position is followed by the West Sumatra Riau region with a total of 10,283 JKK claims or 14.02 percent of the national JKK claims.

PT. Pulauintan Baja Perkasa is a company operating in the building contractor sector. The type of building carried out by PT. Pulauintan Baja Perkasa includes malls, plazas, offices, places of worship, educational buildings and hotels. Now PT. Pulauintan Baja Perkasa is working on one of its projects, namely the construction of the Santika Hotel in the Nagrak area, Sukabumi Regency. The Santika Hotel is planned to have 5 floors. In this implementation, PT. Pulauintan Baja Perkasa uses heavy equipment in the form of a Tower Crane to speed up construction. In the construction of the Santika Hotel there are work stages such as land clearing, foundation excavation, foundation construction, backfilling and structure construction (fabrication and reinforcement of beams and installation and dismantling of column formwork). From these work stages, there are jobs that have a high risk which can cause work accidents and Occupational Diseases (PAK), these stages are found in beam fabrication and steel work. Work accidents that can occur in high risk work include scratched hands, being pinched by the blending bar, falling material from the work above, electric shocks, being pierced by nails, tripping and being hit by metal.

Meanwhile, occupational diseases include low back pain, back pain, dehydration, skin irritation and lockjaw (tetanus). Therefore, risk management is needed as an effort to prevent and control occupational safety and health risks in a planned and structured manner. Based on OHSAS 18001 which states that every company or organization should obtain a procedure for hazard identification, assessment and risk control or what is known as HIRARC (Hazard Identification, Risk Assessment and Determining Control). These three stages are tools in the form of documents that can be used to support risk management.

Thus, research was carried out regarding risk analysis carried out at the fabrication and beam steeling stages using the HIRARC method which can help in reducing the opportunities and consequences of OCCUPATIONAL HEALTH risks.

METHODS

This study used qualitative research methods. According to Sugiyono (2017), qualitative research can be used to examine problems that are temporary and will develop after a researcher has started going into the field to conduct research. The sample in this study was selected using purposive sampling technique. The research was conducted from March 2023 to May 2023 at the Hotel Santika construction project which was built on Jalan Raya Nagrak, Cisarua, Nagrak District, Sukabumi Regency.

Data collection techniques by:

1. Interview

It is a meeting of two people to exchange information and ideas through questions and answers so that meaning can be constructed on a particular topic (Sugiyanto, 2016). Through

interviews, researchers will find out more in-depth things about participants in interpreting situations and phenomena that occur that cannot possibly be discovered through observation (Sugiyono, 2016).

Interviews were conducted with site managers, area supervisors and HSE supervisors.

2. Documentation Studies

Documentation is a data collection technique by obtaining information from various written sources or documents available to the respondent or the place where the respondent lives or carries out daily activities.

The informants in this research are as follows

1. Key informants

Namely, the site manager is the person who is responsible and knows all the implementation in the field of building structures and OCCUPATIONAL HEALTH in the Hotel Santika - Nagrak construction project.

2. Key Informants

Namely the HSE supervisor as a person who knows documentation in the Occupational Health and Safety field and controls the situation in the field. For example, certain considerations include informants who are considered to know best about what will be researched (Sugiyono, 2012).

3. Supporting Informants

Namely, the area supervisor is the one who provides direction in the implementation of the structural and Occupational Health sectors in the Santika - Nagrak Hotel construction project.

RESULT

A. Characteristic of Workers

Triangulation of data sources in this research is one key informant and two key informants. Characteristics of informants in this study include:

1. Work Period

Based on the results of interviews with informants, the average work period of informants covering safety, executors and site managers is 20 years, with a maximum work period of 28 years and a minimum work period of 20 years.

2. Education

Based on data from the project, it can be seen that the minimum education for informants which includes implementers, safety and site managers is high school and a maximum of tertiary education.

B. Interview Results with Site Manager

In the question asked regarding workers in activating iron fabrication as follows "The stages carried out are first the iron arrives and is carried by the Fuso truck, from the Fuso truck it is lifted by TC to the fabrication area, in the fabrication area the iron is cut and shaped according to field needs, the iron is cut with a bar cutter tool and shaped with a bar blending tool, then the iron is taken to the field using a TC tool, however there are also those that are brought manually because the TC cannot reach them after that in the work area the iron is installed. The tools used are a bar cutter, blending bar, meter and gegep. According to the Site Manager, the workers have carried out work according to procedures. If there are workers who violate the rules they will be reprimanded. The workers have also received OCCUPATIONAL HEALTH education during induction according to their respective work locations. Potential dangers include falling objects, being pinched, scratched, tingling, sprained, being hit by metal, dehydration, electric shock and slipping. There is a high risk of being electrocuted, being pinched by equipment and falling from a height. Workers often complain of dehydration and scratches. There have been work accidents where workers fell

from heights due to lack of concentration. The SOP is available at the entrance and is equipped with PPE such as vests, shoes, body harness and helmet. "The tools used have also carried out the checklist stage."

C. Result of Interview with HSE

Questions regarding beam fabrication and steeling activities to HSE showed the following answers "From the beginning the iron arrived, then we used the trailer when the iron arrived, then it was lifted to the fabrication place using a TC. After fabrication arrives, there will be tools called cutting bars and blending bars. Bar cutting that's for cutting iron, the blending bar is what bends iron and then for it will be installed later assembled by a blacksmith, then assembled using a gegep, then using bendrat wire to make boxes like that. After it is finished at the manufacturing site, TC will also assist with installation in the building. The tools used are TC, cutting bar, blending bar, meter and gegep as well as gloves.

The workers have carried out work steps because there is a morning safety briefing and they are always reminded to use PPE. Supervisors also help in explaining worker instructions and conducting briefings so they can work according to instructions. Workers have received safety education where when they first start work they get an introduction to safety, what is dangerous and all the problems they will face. There are potential dangers, namely nails due to formwork work and falls from a height. That's why we always use a safety harness. For heights above two meters, we must use a safety harness. Workers complain that smoking is not allowed. Jobs that are categorized as high risk are workers at height who are dangerous, so we always remind them to use a body harness. For fabrication, it is when cutting the blending that is endangered at the shoulder. Work accidents are experienced as abrasions and natural grazes caused by fatigue which results in a lack of concentration. How to deal with work accidents by using PPE such as helmets, vests, leather gloves, glasses that are adapted to the job, as well as reminding you to be careful and having SOPs in the field. Equipment inspections are carried out once a month by the head office but also re-checked here.

If there is an accident, the manager prepares a first aid kit which can be used for minor accidents, if the accident is serious then they will be taken to the hospital. "Because we have collaborated with hospitals and there is BPJS Employment."

D. Results of Interview with Supervisor

The results of the interview regarding the beam fabrication and reinforcing work area are as follows:

"The stages of work are when the worker enters. The first time the worker has to be induced, the meaning of induction is the meaning of safety, the instructions for the SOPs from Pulauintan which are emphasized there, we have to obey, after the induction is explained, the new worker can work. For our first iron fabrication in the fabrication area, workers must follow standard SOPs regarding wearing personal protective equipment and shoes. For example, like gloves, you have to wear a helmet, if at your height, for example, we have finished erecting the fabric, for example when erecting a column, we have to always wear a body harness. At this stage of the publication, if the formwork is ready, we can install it with formwork blocks, we have to install it with iron. The tools used are a bar blending tool and a bar cutter. Previously we did the fabrication, so that the ties had to be standard SOP, the ties must be full, don't let them come apart. TC tools are the hotel project area while cottages use manual tools. The tools in the activity are gegep, bendrat, car, cutting bar and blending bar.

The work steps are in accordance with the SOP. Because at the start of work, before entering work, there is already an induction, instructions from Pulauintan sop to be used and PPE must be complete. Workers have received OCCUPATIONAL HEALTH education from the start. Danger works like cutting iron. The danger of accidents is in the form of worker negligence, underestimating and not complying with standard SOPs. Workers complained

that work materials had not arrived from Pulau Intan and the rainy weather was a factor. High risk of falling from a height. The only accidents that occurred were minor accidents, namely being pinched or hit by a hammer. To deal with accidents, there are SOPs, there are morning roll call, PPE is available and there are banners related to warnings in the form of caution. There is logistics management that will always replenish goods that will run out. Every week maintenance is carried out on the cutting bar and blending bar and a checklist is carried out by the mechanic. If there are workers who have an accident, they will be taken to the hospital."

DISCUSSION

A. Analyze the results of the interview regarding the stages of work carried out in the fabrication and steel beam activities

Several facts were obtained from the work stages in the beam fabrication and reinforcement activities. First, workers carry out induction. Second, the iron comes transported by truck. Third, from the truck, the iron is lifted to the fabrication area with the help of a TC tool. Fourth, when the iron is fabricated it is cut using a bar cutter, the iron is shaped and bent using a bar blender. Fifth, the iron is brought to the field with the help of a TC tool. And sixth, arriving at the field, the iron is installed with a gegep tool and tied with a tie rod.

According to the theory related to the work stages in iron fabrication (Nanda Irawan, 2019), for blocks, cutting and bending of iron is carried out as needed with a bar cutter and bar bending. Casting of beams is done using a fabrication system in an iron shop and some are assembled on pre-made formwork.

Meanwhile, the work stages for steel beams (Nanda Irawan, 2019) for beam reinforcement are initially fabricated in the iron shop and then lifted using a tower crane to the location to be installed. The beam reinforcing iron that has been lifted is then placed on top of the beam formwork and the end of the beam iron is inserted into the column. Install the concrete decking for the distance between the baton blankets on the base and side of the beam and then fasten it. To strengthen the beam, 3 changes were made to the installation method. The first change is that all the reinforcing steel is fabricated in all parts until the beam is complete, but there are problems when meeting the column reinforcement so the second change is made, namely partially fabricated reinforcement, the longitudinal reinforcement and stirrups are separated but there are problems when cleaning them and the last change is all The steel part is carried out at the place where it will be cast and is not re-fabricated.

From these facts and theories, researchers can provide opinions on the stages of fabrication and beam steeling work, namely the mobilization of iron from trucks to the fabrication area using TC tools. In the fabrication process, bending and cutting of iron is carried out using a bar cutter and bae blender. The iron that is ready is lifted to the location using TC tools. At the target location, the iron is installed in stages, namely installing the iron and fastening the iron with the help of bendrat and gegep.

Both are actually essentially the same, but in the "fact" work stage, the explanation is in general, while for the "theory" work stage it is more about civil/technical.

B. Menganalisis Hasil Wawancara Mengenai Alat yang Digunakan pada Aktivtas Fabrikasi dan Pembesian Balok

Based on facts in the field, the tools used in beam fabrication and steeling activities are tower cranes, bar blenders, bar cutters, gegep, meters and bendrats.

According to the theory of Nanda Irawan (2019), the tools used in beam fabrication and steeling activities are bar cutters, bar blenders, tower cranes.

The tool used in fabrication and beam steeling activities is a Tower Crane used for lifting material. Bar blenders are used to bend iron. Bar cutters are used to cut iron. Gegep is used to help fasten bendrats with iron. The meter is used as a tool to determine length and width. Bendrat is used as a binding tool between iron.

According to researchers, the tool used has a clear function and perhaps the "theoretical" version of the tool used is less complete.

C. Analyzing Interview Results Regarding Workers' Level of Understanding of Work Steps in Beam Fabrication and Casting Activities

Based on research that has been carried out. Researchers discovered several facts Workers' understanding of work steps is usually conveyed through:

1. Morning Briefing

He briefing provides information about work steps, work instructions, use of PPE and work plans.

2. Safety induction

In the induction, the dangers involved in the project are usually conveyed, provision of PPE, maintenance of tools and PPE, explanation of the worker's job desk and related work. According to PP No. 50 of 2012 article 11 paragraphs 1 and 2 as follows:

(1) Entrepreneurs in implementing OCCUPATIONAL HEALTH plans must carry out activities to fulfill OCCUPATIONAL HEALTH requirements.

(2) Activities as intended in paragraph (1) at least include:

a. Control measures;
b. Design and engineering;
c. Work procedures and instructions;
d. Handover of part of the work implementation;
e. Purchase/procurement of goods and services;
f. The final product;
g. Efforts to deal with emergency situations of industrial accidents and disasters; And
h. Emergency planning and recovery.

Based on these facts and theories, according to researchers, the facts in the field are appropriate. Because management has carried out the obligations that have been regulated in article 11 paragraphs 1 and 2 regarding explanation of work steps in two ways, namely safety induction and morning briefing.

D. Analyzing Interview Results Regarding the Level of Workers' Understanding of Work Instructions in Fabrication and Beam Casting Activities

Workers' understanding of work instructions has been carried out well. Usually work instructions are given at the morning briefing and when in the field the worker is also accompanied by a supervisor in carrying out the work instructions and if the worker does not follow the work instructions then a written and verbal warning is given.

According to PP No. 50 of 2012 article 10 paragraph 2 and paragraph 4 as follows:

(2) Entrepreneurs in implementing The Occupational Health plans are supported by human resources in the field of The Occupational Health, infrastructure and facilities.

(4) The infrastructure and facilities as intended in paragraph (2) consist of at least:

a. Organization/unit responsible for OCCUPATIONAL HEALTH;
b. Adequate budget;
c. Operational/work procedures, information, and reporting and documentation; And
d. Work instructions.

Based on the data in the field, it is in accordance with theory because management has carried out its obligations as regulated in article 10 paragraphs 2 and 4 concerning work instructions through morning briefings, supervisors who carry out supervision and assistance in the field and provide warnings when workers do not follow work instructions.

E. Analyzing Interview Results Regarding The Occupational Health Education related to the Work Environment, Hazards and Work Tools used in Fabrication and Reinforcement Activities

Occupational Health education is given when workers first enter during safety induction. In the induction, the dangers involved in the project are usually conveyed, provision of PPE, maintenance of equipment and PPE, explanation of the worker's job desk and related work.Menurut PP No 50 Tahun 2012 pasal 9 ayat 2 dan ayat 3 sebagai berikut :

(2) The Occupational Health plan is prepared and determined by the entrepreneur by referring to the The Occupational Health policy that has been determined as intended in article 7 paragraph 1

(3) In preparing the The Occupational Health plan as intended in paragraph 2, entrepreneurs must consider

a. Initial review results;

b. Identify potential dangers; risk assessment and control;

c. Legal regulations and other requirements; And

d. Owned resources.

The facts in the field are in accordance with article 9 paragraphs 2 and 3 concerning the presentation of dangers that exist in the work environment and dangers related to the tools used, both of which are classified as Occupational Health education.

F. Analyzing Interview Results Regarding Potential Dangers in Beam Fabrication and Casting Activities

Potential dangers in fabrication and beam installation activities at this research site are falling objects, being pinched, scratched, tingling, sprained, being hit by metal, dehydration, electric shock, slipping, being hit by nails, falling from a height.

Based on theory, Potential dangers in iron mobilization activities include workers falling on iron material and workers being pinched by iron.

Potential dangers in iron fabrication activities include workers falling from iron materials, workers being caught in piles of iron, being electrocuted when using bar cutters and bar blenders, being pierced by iron/bend wire, inhaling iron dust, being pinched by blender bars or bar cutters, workers being hit by the cutting wheel, and the cutting wheel reservoir broke.

Potential dangers in iron installation activities are workers falling from iron, workers being pinched by iron, workers becoming dehydrated and tripping over iron.

In conveying potential dangers from facts and theory, it can be concluded that the results are almost the same, except that the presentation of theory is grouped into dangers for each activity.

G. Analyzing Interview Results Regarding the Risks Complained by Workers in Beam Fabrication and Casting Activities

Danger risks that are often complained about in block fabrication and installation activities are dehydration, unpredictable weather, scratched body parts and flying dust which causes eye irritation.

According to PP No. 50 of 2012 article 7 paragraph 1 and paragraph 2, namely conducting a review of potential hazards, assessment and control of OCCUPATIONAL HEALTH. Pay attention to the performance of OCCUPATIONAL HEALTH management and receive input from workers.

The facts on the ground are in accordance with theory because management has carried out the obligations stipulated in article 7 paragraphs 1 and 2 regarding reporting hazards in the work environment.

H. Analyzing Interview Results Regarding Danger Risks in the High Risk Category in Beam Fabrication and Reinforcement Activities

High risks in beam fabrication and installation activities include slipping, falling from a height, being pinched by tools, sprains and electric shock.

According to PP No. 50 of 2012 article 7 paragraph 1 and paragraph 2, conducting a review of potential hazards, assessment and control of OCCUPATIONAL HEALTH. Pay attention to the performance of OCCUPATIONAL HEALTH management and receive input from workers. It can be concluded that the facts on the ground are in accordance with the theory of PP NO 50 of 2012 article 7 paragraph 1 and paragraph 2.

I. Menganalisis Hasil Wawancara Mengenai Kejadian Kecelakaan Kerja pada Aktivitas Fabrikasi dan Pembesian Balok

In iron fabrication and beam fitting activities, several accidents have occurred, namely falls from heights, abrasions due to being hit by tools, being pinched by tools and being hit by nails.

According to PP No. 50 of 2012 article 13 paragraph 1, paragraph 2 and paragraph 3, the information procedure as intended in article 12 paragraph (1) letter d must provide guarantees that occupational health information is communicated to all parties within the company and related parties outside the company. (2) The reporting procedure as in article 12 paragraph (1) letter e consists of reporting:

a. The occurrence of accidents at work;
b. Non-compliance with statutory regulations and/or standards;
c. Occupational health performance
d. Identification of sources of danger; And
e. Which are required based on the provisions of statutory regulations.

(3) Documentation as intended in article 2 paragraph (1) letter f shall at least be carried out on:

a. Laws and regulations in the field of occupational health and standards in the field of Occupational Health ;b. Occupational Health performance indicators;
c. Work permit;
d. Results of risk identification, assessment and control;
e. Occupational Hwalth training activities;
f. Inspection, calibration and maintenance activities;
g. Data monitoring records;
h. Results of workplace accident assessments and follow-up;
i. Product identification including its composition;
j. Information about suppliers and contractors; And
k. Occupational Health Manegement System audit and review.

According to the theory of PP No. 50 of 2012, the facts on the ground are in accordance. because management has carried out the obligations set out in article 13 paragraph 1, paragraph 2 and paragraph 3.

J. Analyze the results of interviews regarding the causes of work accidents in fabrication and steel beam activities

The causes of work accidents in beam fabrication and ironing activities are worker negligence, worker lack of concentration and worker fatigue.

The causes of work accidents in fabrication and beam installation activities are lack of motivation, being too tired, daydreaming, being in a hurry, the condition of the tools being worn out, not using safety measures, not following the rules for use, not understanding the function of the tools, road characteristics, lighting, wind, storms, extreme temperatures.

Each work location has its own causes of work accidents. Accidents that often occur at this research site are carelessness, fatigue, lack of concentration, haste, not following the rules for use, lighting (when working at night) and not using safety equipment.

K. Analyzing Interview Results Regarding Efforts to Reduce the Number of Work Accidents in Fabrication and Reinforcement Activities

Management efforts to reduce the number of accidents in this research are:

1. Provision of PPE
2. The socket is equipped with a housing/cover
3. Carry out tool checklists regularly
4. Conduct induction to new workers
5. Morning briefing to remind you to work safely
6. Always remind you to work according to SOP

According to Law No. 1 of 1970 article 3 paragraph 1 is. prevent, reduce accidents, extinguish fires or explosions. Providing clean air, providing PPE and first aid and preventing hazards from spreading everywhere.

Based on facta theory in the field, it is in accordance with Law No. 1 of 1970 article 3 paragraph 1.

L. Analyzing Interview Results Regarding Socialization of SOPs in Beam Fabrication and Casting Activities

There is socialization of SOPs in various places, for example at the project entrance, on information boards (related to engineering) and in the project area and during the safety induction the SOPs in the project are also explained.

According to Law No. 1 of 1970 article 14 point b as follows:

Install in the workplace he leads, all required work safety drawings and all other training materials, in places that are easy to see and read according to the instructions of the supervisory employee or Work Safety expert;

According to Law No. 1 of 1970 article 14 point b, the facts in the field are appropriate because management has tried to remind the SOP in the field area and has also explained the safety induction.

M. Analyzing Interview Results Regarding the Availability of PPE in Fabrication and Reinforcement Activities

For fabrication and beam fitting activities, PPE is provided in the form of vests, welding gloves, full body harness, helmet, regular gloves, glasses and shoes.

According to Law No. 1 of 1970 article 14 point c, namely providing, free of charge, all personal protective equipment required for workers under their leadership and providing it to every other person who enters the workplace, accompanied by the necessary instructions. according to the instructions of a supervisory employee or work safety expert. The facts in the field are in accordance with the theory, namely that PPE has been provided for workers.

N. Analyzing Interview Results Regarding Checklists and Inspections of Bar Cutter and Bar Blender Tools in Beam Fabrication and Casting Activities.

At this research site, work tools in the form of bar blenders and bar cutters are always checked once a month by management.

According to PP No. 50 of 2012 article 13 paragraph 1, paragraph 2 and paragraph 3, it provides guarantees that OCCUPATIONAL HEALTH information is communicated to all parties within the company and related parties outside the company. And carry out appropriate reporting procedures.

The facts in the field are in accordance with statutory regulations because every month

management carries out a checklist on work tools, namely bar blenders and bar cutters..

O. Analyzing Interview Results Regarding Efforts when Accidents Occur in Beam Fabrication and Casting Activities

When a work accident occurs, what is done by management is:

1. Minor categories such as scratches, eye irritation and sprains provide first aid
2. In the moderate to severe category, such as being pinched or electrocuted, what management does is take them to the nearest hospital which has an MoU with management.

According to PP No. 50 of 2012 article 11 paragraphs 1 and 2 as follows:

(1) Entrepreneurs in implementing the OCCUPATIONAL HEALTH plan must carry out activities to fulfill the OCCUPATIONAL HEALTH requirements.

(2) Activities as intended in paragraph (1) at least include:

a. Control measures;
b. Design and engineering;
c. Work procedures and instructions;
d. Handover of part of the work implementation;
e. Purchase/procurement of goods and services;
f. The final product;
g. Efforts to deal with emergency situations of industrial accidents and disasters; And
h. Emergency planning and recovery.The facts on the ground are appropriate because when there is a work accident the management provides first aid and takes the worker (work accident victim) to the hospital and they already have an MoU with the hospital.

CONCLUSION

The work stages in iron fabrication and beam reinforcement work are:

a. Mobilize iron from trucks to the fabrication area using TC tools,
b. In the fabrication process, iron is formed and cut using a bar cutter and bar blender.
c. The iron that is ready to be lifted to the location with TC tools,
d. At the target location, the iron is installed in stages, namely installing the iron and fastening the iron with bendrat and gegep.

Potential dangers in iron fabrication and beam ironing activities are falling objects, being pinched by iron, scratches, tingling, sprains, tripping, being hit by iron, dehydration, electric shock, slipping, being hit by nails and falling from heights.

Efforts made to reduce the number of work accidents include providing PPE, sockets equipped with covers, carrying out routine equipment checklists, conducting inductions for new workers, conducting morning briefings and always reminding them of the applicable SOPs.

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