

APPLICATION OF ISO 45001:2018 STANDARD ON CONVEYOR BELT MACHINE OPERATIONS AT PT CEMINDO GEMILANG

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ABSTRACT

K3 management in an industry or company becomes a contrast when problems in this domain occur. Because K3 is an element that involves humanity, law, politics and economics. With many important aspects involved, of course the responsibility in carrying out the task of managing K3 is very important. The research was conducted at PT Cemindo Gemilang, Banten with a research focus on conveyor belt machine operations. Data collection was carried out by direct observation with a type of experimental descriptive research. The points that will be discussed in this research are ISO 4500:2018 points in clause 3.21 occupational health and safety risks, K3 risks, 8.2 emergency preparedness and response, and 9.1 monitoring, measuring, analyzing and evaluating work. The research results show that PT Cemindo Gemilang has fulfilled the criteria for implementing ISO 4500:2018, ISO 4500:2018 points in clause 3.21 occupational health and safety risks, K3 risks, 8.2 emergency preparedness and response, and 9.1 monitoring, measurement, analysis and evaluation Work. With the "good" category. However, implementing good K3 management will also benefit every party and related aspects of an industry or company.

Keywords: K3, ISO, Conveyor Belt

INTRODUCTION

Manufacturing industry is producing industry material raw become material product So (Muhammad & Susilowati, 2021). Including cement production, it is a challenging and potentially dangerous environment. In operations such as material transportation and shipping, conveyor belt machines are vital components that serve as the backbone of production, transporting materials efficiently and quickly (Sochib & Kusbiantoro, 2018).

PT Cemindo Gemilang, as one of the producers The leading cement in the region, has long placed K3 as a top priority in its operations. Occupational safety and health are core values that underlie every action taken in the company. To achieve a higher level of safety and minimize risks related to K3, PT Cemindo Gemilang has implemented the ISO 45001:2018 Standard, namely an internationally recognized Occupational Health and Safety (K3) Management System.

Occupational Health and Safety is effort For create safe environment to worker in do work, increase productivity and maintenance source production in a way safe and efficient (Saputra, 2019).

According to (Sylviani et al., 2022) ISO 45001: 2018 is standard international regulations condition For occupational Health and Safety with objective For minimize happen accident or injury illness and disease consequence Work.

This standard provides a comprehensive framework for identifying, managing and reducing

K3 risks in the work environment. Implementation of this standard aims to ensure that every job is carried out safely, work incidents are minimized, and that K3 policies and procedures meet relevant regulatory and legal requirements. (Syahrullah, 2017) (Widjanarko, 2019)

Based on Constitution Republic of Indonesia number 50 of 2012 concerning implementation of the management system occupational Health and Safety with article 5 paragraphs 1 to 4, management occupational Health and Safety if the Company has power Minimum work force of 100 people work, or own potency high danger (Yuliana et al., 2022).

The approach taken to the system ISO 45001:2018 K3 management is based on the Plan-Do-Check-Act (PDCA) concept (Widiyanza Luthfi Yania, Winarko, 2022). The PDCA concept is a literal process is used A company or organization For reach enhancement sustainable. Draft This applied inside system management and each element, namely:

- Plan : determine and assess K3 risks, opportunities accident work, and K3 results
- Do : implement in accordance with plan
- Check : monitor and measure related activities and processes policy as well as K3 objectives and reporting the result
- Increase : take action increase K3 performance overall sustainable For reach maximum result

PDCA concept can seen through picture following :

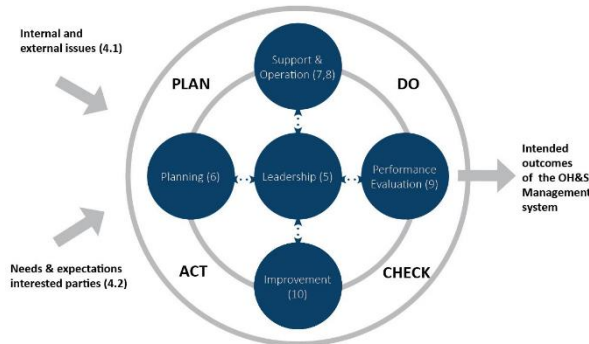


Figure 1. PDCA ISO 4500:2018 concept

Study This will explore in depth regarding application of the ISO 45001:2018 Standard in the context of conveyor belt machine operations at PT Cemindo Gemilang. Study This will discuss the concrete steps that companies have taken to comply with this standard, the benefits that have been obtained in terms of occupational safety, as well as the challenges faced during the implementation process.

Additionally, this research will provide insights that can be applied by other companies operating in industries that rely on conveyor belt machines for production. Work safety is an inseparable aspect in every work environment, and the implementation of the ISO 45001:2018 Standard at PT Cemindo Gemilang is a clear example of how serious efforts to comply with international safety standards can bring significant positive changes in protecting workers and increasing operational efficiency.

RESEARCH METHODS

Study carried out at PT Cemindo Gemilang , Lebak Banten for 30 days . Data collection is carried out with method observation direct to conveyor belt machine . Research methods done with method studies case-descriptive qualitative . A case study is a form of research (inquiry) or study of a problem that has particularity, can be carried out using either a qualitative or quantitative approach, targeting individuals or groups, even the wider community. (Raco, 2010) . Points to be discussed in the research This is ISO 4500:2018 points in clause 3.21 risk

health and safety Work K3 risks , 8.2 preparedness and response emergency , and 9.1 monitoring , measurement , analysis and evaluation Work .

Research flow Can explained as following :

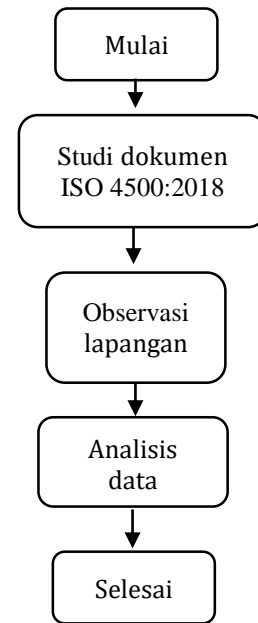


Figure 2. Flowchart study

RESULTS AND DISCUSSION

a. ISO 4500:2018 document study

ISO is A standard international which refers to regulations , laws , as well as universal guide . ISO 4500:2018 is A standard international which refers to the system management and safety work (OHSMS) *occupational health and safety management system* . ISO 4500:2018 regulations are A framework used in establish more K3 regulations deepen , improve system management health and safety workers ' work in a company or industry . (PT. Steel Pipe Industry of Indonesia, 2018)

Adoption ISO 4500:2018 system in K3 management can help more organization good and reduce accident as well as incident . ISO 4500:2018 is designed to be compatible with other ISO standards as in the discussion management quality (ISO 9001) and management environment (14001). Compatibility This can tighten integration between system management health and safety workers ' work with framework designed work in a way whole .

The sub- clause in chapter 3 of ISO 4500:2018 explains about risk health and safety

Work K3 risks . Risk normal identified as incident potential cause loss in Work . In definition otherwise , risk normal known as form combination consequence from something events (incl changing circumstances) of the associated “ possibilities . ” with events . Study will focuses on risk What only one has a chance become accident work on operations machine *conveyor belt* at PT Cemindo Brilliant evaluate method anticipate it .

Sub 8.2 preparedness and response emergency discuss about determination organization and processes respond situation emergency potential . Identification response situation emergency potential contained in ISO 4500:2018 in 6.1.2.1 , namely :

- Set plan Spry emergency For potential situation into the category situation , incl provision help First
- Give *training* to situation emergency
- Test ability plan responsive emergency in a way periodically
- Evaluation performance and revising responsive planning emergency , incl after testing
- Communicate and deliver relevant information about not quite enough answer to all worker
- Give relevant information to contractors , visitors , authorities government .
- Ensure involvement interested party as well as relevant in consider needs and abilities in development plan emergency .

Sub clause 9.1 monitoring , measurement , analysis and evaluation Work discuss about task organizations must implement , establish , maintain processes for monitoring , measurement , and evaluation . Incoming points into sub clauses This in the form of :

- Subject what is necessary be measured
- Monitoring , measurement , analysis and evaluation methods performance
- The criteria will be used organization For evaluate K3 performance
- The results of K3 monitoring must be communicated .

b. Observation Field

Study done for 30 days at PT Cemindo Brilliant Kepuh , Kec . Ciwandan , City Cilegon , Banten , 42446. Research focused on operations machine *belt* functioning *conveyor* For deliver transport materials . Transport material sent together with other mixed materials during process delivery .

C. data analysis

Subclause 3.21 risks health and safety Work K3 risks review return about danger What only those with potential become accident Work .



Figure 3. Conveyor belt that does not own safety from outside

Conveyor belt is functioning components For deliver materials such as sand , stones and others in short time and practical . However , it is reversed convenience , potential danger For happen accident Work lurking moment K3 management does not applied so strict . In figure 3, the conveyor belt No own functioning security protect *conveyor belt* .

Figure 4. Conveyor belt has installed wire safety as



form anticipation accident Work

With installed it wire safety on the conveyor belt , then ISO 4500:2018 3.21 risk clause health and safety Work K3 risks have been addressed and have been fulfilled with category Good .

Subclause point 8.2 preparedness and response emergency , includes pre-plan that will held To use ready For respond possible emergency harm worker .

Table 1. Implementation of Sub 8.2 preparedness and response emergency




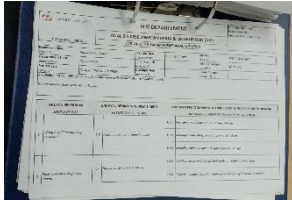


NO	Points Clause	Documentation / information	6 Give relevant information to contractors, visitors, authorities government.	Briefing about relevant information about responsive emergency.
1	Set plan Spry emergency For potential situation into the category situation, incl provision help First	 <p data-bbox="520 647 836 741"><i>briefing</i> about plan For commission responsive emergency</p>		 <p data-bbox="1147 636 1461 730">installation infographics about information prevention situation emergency</p>
2	Give <i>training</i> to situation emergency	 <p data-bbox="520 958 836 1019">Training towards situation emergency</p>	7 Ensure involvement interested party as well as relevant in consider needs and abilities in development plan emergency.	 <p data-bbox="1147 978 1461 1072">Socialization to officer outside gate about situation responsive emergency.</p>
3	Test ability plan responsive emergency in a way periodically	 <p data-bbox="520 1330 836 1424">list of points that have been implemented in the situation responsive emergency</p>	Of the 8 points listed in sub- clause Sub 8.2 preparedness and response emergency, PT Cemindo Gemilang Has implemented 8 out of 8 points with category Good in countermeasures situation emergency.	
4	Evaluation performance and revising plan (<i>planning</i>) responsive emergency, incl after testing	 <p data-bbox="520 1673 836 1733">Post testing responsive emergency</p>	In Sub clause 9.1 monitoring, measurement, analysis and evaluation, measurement is referred to Can form measurement past evaluation work, or tools used and related with performance of safety and monitoring programs health. At PT Cemindo Excellent, check tool as well as related objects with safety and health Work scheduled routine For Can measure and evaluate extent of tools Still Can works with Good or No.	
5	Communicate and deliver relevant information about not quite enough answer to all worker			

Figure 5 checking APAR as form evaluation with performance of safety and monitoring programs health

Monitoring can covers a checking process carried out periodically with Keep going continuously , watching , supervising in detail or , determine the status for Can identified change from level required performance or expected . At PT Cemindo Glorious , monitoring done in a way periodically so sub clause 9.1 monitoring , measurement , analysis and evaluation , measurement has fulfilled with category Good .

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on results and discussion , then Can taken conclusion as following :

1. PT Cemindo Brilliant has implementing ISO 4500:2018 3.21 risks health and safety Work K3 risks . Implementation of sub clause 3.21 risks health and safety Work K3 risks , carried out with group discussion forums.
2. PT Cemindo Brilliant has implement ISO 4500:2018 8.2 preparedness and response emergency with form A special K3 team handle and respond circumstances emergency .
3. PT Cemindo Brilliant has implementing ISO 4500:2018 9.1 monitoring , measurement , analysis and evaluation , measurement with monitor in a way routine matter what to be urgency about performance of safety and monitoring programs health .
4. With all categories that are met , and based on analysis carried out to ISO 4500:2018 points , PT Cemindo Brilliant has been in the sub clause 3 .21 risk health and safety Work K3 risks , 8.2 preparedness and response emergency , and 9.1 monitoring , measurement , analysis and evaluation Work get Good category .

THANK-YOU NOTE

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