Analysis of ISO 45001:2018 and Performance Management Implementation Toward Work Accidents and Performance of Companies in Indonesia's Leading Steel Industry

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Abstract

Indonesia is one of the leading steel producers in Southeast Asia with the second highest production value after Vietnam. For the sake of good business processes and legitimacy, several steel producers in Indonesia have followed international standards in occupational health and safety management such as OHSAS 18001 and ISO 45001. In order to continuously improve the performance of the Occupational Health and Safety Management System, the company uses the Deming Cycle in its implementation. The steps taken to improve the performance are through commitment and leadership, followed by planning with context analysis, operational planning, risk assessment and control. In the implementation process, identification is also needed to measure and develop individual and team performance in order to align performance with the strategic goals of the organization or company. In other words, ISO 45001:2018 and performance management can affect the level of work accidents and company performance, so an analysis is needed to determine the effect of ISO 45001:2018 and performance management on work accidents and company performance. The results of this study are ISO 45001:2018 has a positive and significant effect on work accidents while performance management has no effect on work accidents. The next result is ISO 45001:2018 and performance management has a positive and significant influence on company performance. Meanwhile, work accidents have no effect on company performance.

Keywords
ISO 45001:2018, Performance Mangement, Work accident, Company performance, Influence.

1. Introduction
The steel industry currently has a bright future, as the sector has a major role in supplying raw materials for national development in various fields. The level of domestic steel consumption is influenced by the economic growth of a country. Demand for steel production will increase in line with the country's economic development. This demand is mainly in terms of growth for the construction sector, automotive industry as well as the manufacturing industry sector. In 2016, Indonesia's total crude steel consumption was 14 million tones, and the total production that could be achieved by domestic steel producers was only 8 million tones. Therefore, to meet domestic demand, 6 million tons of steel products were imported. In 2020-2024, the domestic production capacity is 17 million tones and will be gradually increased in 2025 to 25 million tones with a focus on developing seamless pipes, ferrous alloys and stainless steel. (Badan Koordinasi Penanaman Modal, 2016)

The iron and steel industry is a very strategic and sensitive industry. The performance of steel companies in Indonesia has also experienced a significant level as evidenced by the increased capacity of some manufacturers. From 2016 which is only 6.5 million metric tons to 10 million metric tons in 2018. The second highest is after Vietnam in Southeast Asia which produced 14.5 million metric tons in 2018. In the future, Indonesia will be the ASEAN steel market due to economic growth, geography and better infrastructure (Wee Jin, 2020)

In the context of more competitive global competition in business, there have been developments in industrial systems and processes, both in terms of system complexity and sophistication. This requires higher global standards. The new OSH management system uses a precautionary approach to potential risks, identification of risks in the workplace, implementation of mitigation measures and information to others about the balance of risks. (Kornelius, 2018)

Some countries already have applicable Health and safety laws and must always be respected. For the sake of business processes, steel producers also follow international standards on occupational health and safety management such as OHSAS 18001 and ISO 45001. The company's commitment to continuously review and improve its health and safety performance can be demonstrated by compliance with these standards. The World Steel Forum collects safety data from its membership and shows a significant and steady decline in the Lost Time Injury Frequency Rate (LTIFR) over the past ten years. The injury rate per million hours worked has decreased from 4.55 in 2006 to 0.83 in 2019 with a decrease of 82%. (World Steel Association, 2020)

ISO 45001 is a management system that can be developed to support a systematic program of employee health and safety policy in the company to provide a safe and healthy work environment, prevent accidents and occupational diseases so that the company's strategic objectives, good business performance. and occupational health and safety, achieved. (Kornelius, 2018)

To be able to continuously improve the performance of ISO 45001, in its applications the company uses the Deming Cycle. The first thing to do is commitment and leadership, followed by planning with context analysis, operational planning, risk assessment and control. And the last is the process of monitoring, auditing, and evaluation of work in terms of management review. (Purwanto, Asbari, et al., 2020)

Revealed safety and risk management procedures, occupational safety and health regulations, and organizational safety support have indirect effects on employee job performance (Kaynak et al., 2016). The implementation of an integrated management system has a significant impact on a company's business performance (Purwanto, Putri, et al., 2020).

Performance management is an ongoing process of identifying, measuring, and developing individual and team performance as well as aligning performance with the strategic goals of the organization. Organizations use this to improve organizational performance. (Aguinis, 2013) With clear organizational goals can help each member or employee understand and do what the organization wants. (Rini et al., 2019)

Performance management system is a system used to evaluate employees related to performance targets, competency development, and performance improvement and performance rewards (Keleş & Aycan, 2011). The system will differ significantly due to the culture, laws and technology used. Performance management systems can find indicators of employee performance malpractices that affect the goals, vision and mission of the organization. As well as competency gaps in the organization now and in the future can also be identified with this system. The management of conflicts that occur can be assisted with a performance management system, can also optimize human resources and identify employee training needs (Mangipudi et al., 2019).

To be able to continuously improve the performance of ISO 45001, in its implementation, the company uses the Deming cycle. The first thing that needs to be done is commitment and leadership, followed by design with context analysis, operations design, risk assessment and control. Performance management is an ongoing process to identify, measure and develop individual and team performance and align performance with the organization's strategic objectives, both financial and non-financial.

Instead of this explanation, to find out the impact of implementing ISO 45001:2018, an investigative analysis has been carried out to analyze the impact of implementing ISO 45001:2018 and managing achievements on work accidents and company achievements.

2. Literature Review
2.1. ISO 45001:2018
The organization is responsible for the health and safety of its workers and others who may be affected by its activities. This responsibility includes promoting and protecting their physical and mental health. The implementation of the safety management system aims to enable organizations to provide a safe and healthy workplace, prevent work-related injuries and ill health, and continuously improve safety management system performance. (International Standard Organization, 2018)

The purpose of a safety management system is to provide a framework for managing risks and opportunities. The scope of the safety management system is to prevent work-related injuries and unfavorable health for workers and to provide a safe and healthy workplace; therefore, it is imperative for organizations to eliminate hazards and minimize OSH risks by taking effective preventive and protective measures.(International Standard Organization, 2018)

The implementation of the OHS management system is a strategic and operating decision for an organization. The success of an OH&S management system depends on the leadership, commitment and inclusion of all levels and functions of the organization. The implementation and operation of an OH&S management system, its effectiveness and ability to achieve the desired decisions depend on several key factors, which may include:
a) The highest management leadership, commitment, responsibility and accountability;
b) Management superiors build, lead and promote a culture within the organization that supports the desired results of the OH&S management system;
c) Communication;
d) Bargaining and inclusion of workers, and, where applicable, workers' representatives;
e) The allocation of resources needed to maintain it;
f) The basis of the CTF, which is in line with the overall strategic objectives and goals of the organization;
g) Effective processes to identify hazards, manage OHS risks and take advantage of OHS opportunities;
h) Continuous performance appraisal and monitoring of OHS management system to improve OHS performance;
i) Integration of the OHS management system into the organization's business processes;
j) OHS objectives that align with the OHS basis and take into account organizational hazards, OHS risks and OHS opportunities
k) Compliance with statutory and other requirements. (International Standard Organization, 2018)

2.2. Performance Management
Performance is the efficiency and/or effectiveness of an action. Efficiency is the amount of resources used by an action to produce a result or output. Effectiveness is the extent to which the outcome of an action meets an expectation, need, or expectation. (Bititci, 2015)

Performance Management is an ongoing process of identifying, measuring and developing the performance of individuals and teams as well as aligning performance with the strategic objectives of the organization. (Aguinis, 2013) Organizations use this to improve organizational performance. With a clear organizational template, it can help every expert or worker understand and do what the organization wants.(Rini et al., 2019)

Performance management is an ongoing process of identifying, measuring, developing individual and team performance as well as aligning performance with the strategic objectives of the organization. There are two main components to the definition of performance management, which are as follows:
1. Continuous process; involves an endless process of setting goals and objectives, observing performance, and providing and receiving ongoing guidance and feedback.
2. Alignment with strategic objectives; Managers ensure that employee activities and outputs are in line with organizational goals thus helping the organization gain a competitive advantage. Thus, performance management establishes a direct relationship between employee performance and organizational goals and makes employee contributions to the organization clear. (Aguinis, 2013)

Performance management must be compatible with the process-based and flexible organization. the performance management process consists of:

1. Design: agreeing with objectives and skills requirements and producing achievement agreements and performance improvement and personal development plans.
2. Implementation: carry out the activities necessary to achieve the objectives and plans.
3. Monitoring: checks on progress towards achieving the objectives.
4. Assessment: assessing progress and achievements so that designs can be provided and approved (Armstrong, 2006)

2.3. Work Accident

Accidents occur depending on the circumstances, whether resulting in minor or potential death but not causing harm. Accidents are usually more related to on -site incidents that lead to things that are harmful to the building such as leaks, fires and explosions. (A. C. Ahmad et al., 2016)

Heinrich's Pyramid Theory (Heinrich, 1932; Heinrich et al., 1980) is one of the fundamental things that form the basis of occupational safety management. This theory suggests a strong correlation between near misses, minor accidents, serious accidents (requiring hospitalization) and death. (Marshall et al., 2018)

Accident rates of different severity are associated not because accidents with moderate severity can lead to fatal accidents but because they have common causes that result in certain incident trends. In general, risk factors produce probability distributions that indicate the proportion of small, serious and fatal accidents. (Marshall et al., 2018)

2.4. Company Performance

A performance measurement system is a set of measures that help an organization conduct its business operations effectively and efficiently in achieving its goals.(K. Ahmad & Zabri, 2016) In general, the measurement of company performance can be divided into financial and non -financial components.

1. Financial Performance

Financial condition can indicate the effectiveness and efficiency of the company's performance. The measurement of a company's financial performance can be seen through its financial statements and financial ratios. Financial performance is important to be maintained and improved so that the company can operate well and attract investors. (Azib et al., 2020). In reporting, the accounting and finance division generally prepares four types of financial statements as follows:

a. Income statement: includes income earned by the company over a period of time.

b. Balance Sheet: contains information on the date of preparation of the company's assets (all values owned by the company); liabilities (company debts); and shareholders 'equity (money invested by company owners).

c. A cash flow statement is a statement of cash received and cash issued by a company over a period of time.

d. The shareholders 'equity statement provides a detailed description of the company's activities in the value of ordinary shares and options, retained earnings accounts and changes in owners' equity that do not appear on the income statement.(Titman et al., 2011)

2. Non Financial Performance

Non -financial performance measurement systems have emerged as a result of the increased adoption of modern manufacturing practices that are capable of enhancing critical performance improvement activities. Non -financial performance reports focus on clear strategies and provide inside information more quickly and in a timely manner. In order to be able to respond to the various information required in decision making. Non -financial performance related to customers, efficiency, product development and business growth as well as corporate social responsibility, can be used by the company in measuring the non -financial performance of the company.(K. Ahmad & Zabri, 2016)

3. Methods

Questionnaires were made to obtain primary data that is data collected based on direct observations of objects in the field. compiled based on the required and relevant analytical parameters in line with the goals and objectives of this study. This questionnaire was given to the respondents' representatives based on the objectives of the study. Respondents who are the object of this study are those who are directly involved in the implementation of the quality management system ISO 45001: 2018, either in the field or in the offices of the largest steel companies in Indonesia. The questions given are based on a Likert scale. Likert scale is a set of declarative statements addressed to respondents to agree or disagree with this statement on a scale of 1-5 (strongly disagree, disagree, disagree or disagree (neutral), agree, and strongly agree) (Budiastuti & Bandur, 2018)

The population for this study is employees involved in the implementation of ISO 45001: 2018 in the largest steel company in Indonesia at the level of Supervisors and Engineers with a total population of 723 people (in 2018). The sample is part of the population that is expected to be able to represent the population in the study. According to (Chin, 2000) the minimum sample size used by PLS-SEM is smaller than SEM, i.e. 30-100 sample size. So that 80-100 samples will be taken through questionnaires. (Zuhdi et al., 2016)
In this study, the proposed flow chart for the hypothesis model is as follows
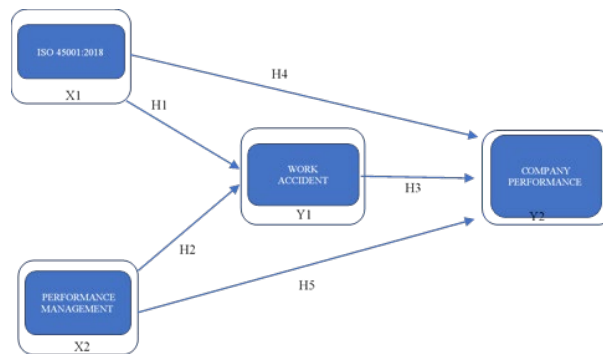
Picture 1. flow chart hypothesis

From the above frame of mind, the hypotheses of this study consist of:
1. Hypothesis 1: There is an effect of the implementation of ISO 45001: 2018 on the number of work accidents.
2. Hypothesis 2: There is an effect of performance management on the number of work accidents.
3. Hypothesis 3: There is an effect of the number of work accidents on the performance of the company.
4. Hypothesis 4: There is an effect of the implementation of ISO 45001: 2018 on company performance.
5. Hypothesis 5: There is an effect of job management on company performance.

4. Data Collection

This section describes the grouping of respondents based on their characteristics. Respondent characteristics were used to determine the diversity of respondents based on gender, position, and years of service. The characteristics of the respondents are presented in the following table.

Table 1. Respondent descriptive information

Criteria		Total Respondent
Gender	Male	80
	Female	1
Position	Manager	1
	Superintendent	6
	Supervisor/Engineer	59
	Junior Engineer	15
Period of work	< 5 years	7
	5-10 years	31
	10-15 years	25
	> 15 years	18

4.1. Convergent Validity

Convergent validity of measurement models with reflexive indicators was assessed based on the correlation between item scores and construct scores calculated by PLS. The convergent validity value is the value of the loading factor on the latent variable with its indicator. external load values between 0.5 - 0.6 are considered sufficient to meet the convergent validity requirements. (Ghozali, 2021). The test results are recalculated and explained as follows:

Table 2. *Confirmatory Factor Analysis* (CFA) Penerapan ISO 45001:2018

Variable	Original ample (O)	ample Mean (M)	Statistics	P Values	Description
IS1 <- ISO 45001:2018 (X1)	0.767	0.766	11.733	0.000	Valid
IS2 <- ISO 45001:2018 (X1)	0.803	0.801	18.563	0.000	Valid
IS3 <- ISO 45001:2018 (X1)	0.733	0.730	12.477	0.000	Valid
IS4 <- ISO 45001:2018 (X1)	0.774	0.769	12.733	0.000	Valid
IS5 <- ISO 45001:2018 (X1)	0.820	0.819	17.584	0.000	Valid
IS6 <- ISO 45001:2018 (X1)	0.821	0.821	18.765	0.000	Valid
IS7 <- ISO 45001:2018 (X1)	0.909	0.908	40.156	0.000	Valid
IS8 <- ISO 45001:2018 (X1)	0.821	0.816	17.855	0.000	Valid
IS9 <- ISO 45001:2018 (X1)	0.812	0.813	16.889	0.000	Valid
IS11 <- ISO 45001:2018 (X1)	0.780	0.778	14.354	0.000	Valid
IS12 <- ISO 45001:2018 (X1)	0.712	0.710	9.537	0.000	Valid
IS13 <- ISO 45001:2018 (X1)	0.747	0.743	13.091	0.000	Valid
IS14 <- ISO 45001:2018 (X1)	0.877	0.875	29.834	0.000	Valid
IS15 <- ISO 45001:2018 (X1)	0.849	0.850	23.109	0.000	Valid
IS16 <- ISO 45001:2018 (X1)	0.772	0.766	13.905	0.000	Valid
IS17 <- ISO 45001:2018 (X1)	0.871	0.869	29.825	0.000	Valid
IS18 <- ISO 45001:2018 (X1)	0.784	0.783	16.252	0.000	Valid
IS19 <- ISO 45001:2018 (X1)	0.803	0.798	16.537	0.000	Valid
IS20 <- ISO 45001:2018 (X1)	0.807	0.801	13.318	0.000	Valid
IS21 <- ISO 45001:2018 (X1)	0.765	0.763	14.712	0.000	Valid

Based on Table 2 above, it can be seen that the overall loading factor of the first order CFA indicates that the model has met the convergent validity requirement because the value of the loading factor of all indicators is above 0.7. This means that all indicators are valid as measuring instruments for their respective variables on the application of ISO 45001: 2018 variables.

Table 3. *Confirmatory Factor Analysis* (CFA) Management Performance Implementation

Variable	Original Sample (O)	Sample Mean (M)	T Statistics	P Values	Description
MK1 <- Performance management (X2)	0.721	0.726	11.175	0.000	Valid
MK2 <- Performance management (X2)	0.866	0.864	28.337	0.000	Valid
MK3 <- Performance management (X2)	0.770	0.763	15.101	0.000	Valid
MK4 <- Performance management (X2)	0.835	0.832	20.630	0.000	Valid
MK5 <- Performance management (X2)	0.788	0.779	15.221	0.000	Valid
MK6 <- Performance management (X2)	0.683	0.689	10.372	0.000	Valid
MK7 <- Performance management (X2)	0.729	0.730	12.981	0.000	Valid
MK8 <- Performance management (X2)	0.672	0.677	10.923	0.000	Valid
MK9 <- Performance management (X2)	0.636	0.640	9.331	0.000	Valid
MK10 <- Performance management (X2)	0.843	0.836	20.690	0.000	Valid
MK11 <- Performance management (X2)	0.821	0.816	18.046	0.000	Valid
MK12 <- Performance management (X2)	0.788	0.784	16.236	0.000	Valid
MK13 <- Performance management (X2)	0.870	0.867	25.346	0.000	Valid

Based on Table 3. above, it can be seen that the overall loading factor of the first order CFA indicates that the model has met the convergence validity requirement. This means that all indicators are valid as measuring tools for their respective variables over the variables performing performance management.

Table 4. *Confirmatory Factor Analysis* (CFA) Work accident

Variable	Original Sample (O)	Sample Mean (M)	T Statistics	P Values	Description
AK1 <- Work accident (Y1)	0.774	0.778	10.839	0.000	Valid
AK2 <- Work accident (Y1)	0.852	0.852	19.205	0.000	Valid
AK3 <- Work accident (Y1)	0.652	0.649	6.787	0.000	Valid
AK4 <- Work accident (Y1)	0.738	0.734	8.228	0.000	Valid
AK5 <- Work accident (Y1)	0.814	0.811	14.799	0.000	Valid

Based on Table 4. above, it can be seen that the overall loading factor of the first order CFA indicates that the model has met the convergence validity requirements. This means that all indicators are valid as measuring tools for their respective variables on the Work Accident variable.

Table 5. *Confirmatory Factor Analysis* (CFA) Company performance

Variable	Original Sample (O)	Sample Mean (M)	T Statistics	P Values	Description
KP1 <- Company performance (Y2)	0.776	0.776	17.435	0.000	Valid
KP2 <- Company performance (Y2)	0.737	0.734	12.261	0.000	Valid
KP3 <- Company performance (Y2)	0.795	0.796	15.215	0.000	Valid
KP4 <- Company performance (Y2)	0.844	0.845	23.784	0.000	Valid
KP5 <- Company performance (Y2)	0.755	0.754	15.285	0.000	Valid
KP6 <- Company performance (Y2)	0.790	0.790	16.172	0.000	Valid
KP7 <- Company performance (Y2)	0.729	0.728	14.616	0.000	Valid
KP8 <- Company performance (Y2)	0.822	0.822	19.328	0.000	Valid
KP9 <- Company performance (Y2)	0.626	0.627	8.855	0.000	Valid
KP10 <- Company performance (Y2)	0.703	0.701	13.347	0.000	Valid

Based on Table 5. above, it can be seen that the overall loading factor of the first order CFA indicates that the model has met the convergence validity requirements.

4.2. *Discriminant Validity.*

This value is the value of the cross -loading factor that is useful for determining whether a construct has sufficient discrimination, i.e. by comparing the load value on the intended construct which must be greater than the load value with other constructs. To measure the validity of discrimination, it can be viewed from: Fornell-Larcker Cirteiron, Cross Loadings and Heretroit-Monotrait Ratio (HTMT). However, on the SmartPLS website, the best recent measure is to look at the Heretroit-Monotrait Ratio (HTMT) value. If the HTMT value is <0.90 then a construct has good discriminatory validity (Ghozali, 2021).

Table 6. HeretroitMonotrait Ratio (HTMT)

Variable	Angka Work accident (Y1)		ISO 45001:2018 (X1)	Kinerja Perusahaan (Y2)	Manajemen Kinerja (X2)
Angka Work accident (Y1)					
ISO 45001:2018 (X1)	0.611				
Company performance (Y2)	0.426		0.794		
Performance management (X2)	0.542		0.788	0.86	

4.3. Composite Reliability, *Average Variance Extracted* (AVE), dan Cronbach's Alpha
This value describes the validity of the adequate convergence. means that one latent variable can explain more than half of the variance of the indicator in the mean. Expected AVE value> 0.5. And for data having a composite reliability> 0.8, it has high reliability and for reliability tests it is amplified by Cronbach Alpha. Expected values> 0.7 for all constructs. (Ghozali, 2021)

Table 7. Composite Reliability, *Average Variance Extracted* (AVE), dan Cronbach's Alpha

Variable	Cronbach's Alpha	Composite Reliability	AVE
Work accident (Y1)	0.971	0.973	0.644
ISO 45001:2018 (X1)	0.824	0.878	0.592
Company performance (Y2)	0.918	0.932	0.578
Performance management (X2)	0.943	0.951	0.600

4.4. *Variance Inflation Factor* (VIF)

Multicollinearity is a phenomenon in which two or more independent variables or exogenous constructs are highly correlated, resulting in poor model prediction capabilities. The value of VIF must be less than 5, because if more than 5 it indicates the existence of collinearity between constructs. (Ghozali, 2021)

Table 8. *Variance Inflation Factor*

Variable	Angka Work accident (Y1)	Company performance (Y2)
Work accident (Y1)		1.448
ISO 45001:2018 (X1)	2.314	2.584
Company performance (Y2)		
Performance management (X2)	2.314	2.348

4.5. R Square on endogenous constructs.

The value of R Square is the coefficient of determination on the endogenous construct. Testing of internal models or structural models is carried out to see the relationship between variables, significance values and R-square of the research model. Hypothesis testing was performed by bootstraping re -sampling method. The test statistics used were t test statistics. The square R values are 0.67 (strong), 0.33 (moderate) and 0.19 (weak). (Ghozali, 2021)

4.6. Hypothesis testing

a. Impact of ISO 45001: 2018 Implementation on Work Accidents

The test results showed a path coefficient value of 0.432 which was significant at t-statistic 2.352> t-table 1.96 and at P value of 0.015 <0.05 significance level. Thus stating that there is a significant impact between the implementation of ISO 45001: 2018 on Work accidents.

b. The Influence of Performance Management Implementation on Work Accidents

The test results showed that the path coefficient value of 0.153 was not significant at t-statistic 0.769 <t-table 1.96 and at P value of 0.221> 0.05 significance level. Thus states that there is no significant effect between the implementation of Performance management on work accidents.

c. The impact of work accidents on company performance

The test results showed that the path coefficient value of -0.115 was not significant at t-statistic 1.501 <t-table 1.96 and at P value of 0.067> 0.05 significance level. It is thus stated that there is no significant effect between the execution of a Work accident on the performance of the Company.

d. The influence of the implementation of ISO 45001: 2018 on the performance of the Company

The test results showed a path coefficient value of 0.338 which was significant at t-statistic 3.858 <t-table 1.96 and at P value 0.000> 0.05 significance level. Thus stating that there is a positive and significant effect between the implementation of Work accidents on the performance of the Company.

e. The Influence of Performance Management on Company Performance

The test results showed a path coefficient value of 0.553 which was significant at t-statistic 6.814 <t-table 1.96 and at P value 0.000> 0.05 significance level. Thus H1 is accepted, which states that there is a significant influence between the implementation of Performance management on the performance of the Company.

5. Results and Discussion

5.1. Impact of ISO 45001: 2018 Implementation on Work Accidents

From the hypothesis test obtained in this research that ISO 45001: 2018 has a positive and significant correlation with work accidents, this shows that the Work Safety Management System implemented by the company is able to protect employees from work accidents.

The company has established the ISO 45001: 2018 Occupational Health Safety Management System starting 2018, which is a continuous migration from the previous Occupational Safety Management System, namely OHSAS 18001 and ISO 45001: 2015. The clauses specified in ISO 45001: 2018 significantly mediate fully the Work accident variables. Systematic and organizational applications in planning, organizational support, organizational context, operations, performance appraisal, leadership and employee participation, organizational context, and improvement have been well carried out by the company so that it can be implemented well also by employees.

The effect of the implementation of the Safety Management System is that employees feel safe and comfortable in the workplace so that in terms of morale the productivity of employees is better and motivated to work if the K3 culture in the company is good.

5.2. The Influence of Performance Management Implementation on Work Accidents

From the hypothesis test, it was found that the relationship between performance management and work accidents has a positive correlation between performance management and work accidents, but it is not significant. Performance management indicators, namely performance prerequisites, performance planning, implementation, evaluation, review, and performance updates have positive correlations to Performance management variables and work accidents but are not significant.

One of the indicators to implement Performance management for the prevention of work accidents is the Key Performance Indicators each employee meets Zero Accidents in one year. The zero accident indicator in the Key Performance Indicators to achieve the maximum LTIFR goal contained in the Unit Work Targets for the Work Division. The dimensions supporting the Performance management variable were also insignificant to work accidents. Prerequisites, planning, implementation, evaluation, review and updating are dimensions inherent in Performance management variables. In performance execution, one of the indicators measured is work behavior. the company has regulated safe and comfortable work behavior in 10 Company K3 Rules.

To support the K3 implementation program related to Performance management, the company has taken several measures, including:
1. Conduct more intensive security promotions and campaigns;
2. Promote a program to report near misses to
all employees and partners;
3. Safety socialization with daily safety talks, sub P2K3 joint inspections involving partners;
4. Security Committee/Sub P2K3 Meeting every month by inviting colleagues;
5. Encourage the implementation of inspections;
6. Review Procedures, WI and SOPs periodically.

5.3. The impact of work accidents on company performance

From the hypothesis test, it is found that the relationship between Work accidents and Company performance is negative and insignificant. Negative correlations indicate that work accidents are a variable that reduces company performance. However, this was not significant in the model studied. As a mixed variable between ISO 45001: 2018 and Company performance, Work Accidents also do not mediate between the two. In fact, work accidents are related to the economic value and reputation of a company. A work accident that occurs will cause the company to pay insurance premiums to employees and the company's reputation at zero value of working hours which is the standard for the company will not be achieved.

5.4. The influence of the implementation of ISO 45001: 2018 on the performance of the Company

From the hypothesis test, it is found that the relationship between the implementation of ISO 45001: 2018 on the performance of the Company is a positive and significant correlation. This indicates that the implementation of ISO 45001: 2018 can improve the performance of the Company. All dimensions of ISO 45001: 2018 implementation variables are positively correlated and significantly support the Company's performance. These dimensions are planning, organizational support, organizational context, operations, performance appraisal, leadership and employee participation, organizational context and improvement. So much so that it can be construed that each clause in ISO 45001: 2018 implemented by the company has a positive impact on the performance of the Company.

5.5. The Influence of Performance Management on Company Performance

From the hypothesis test, it is found that the relationship between the implementation of performance management with company performance is a positive and significant correlation. This proves that the implementation of performance management can improve the performance of the company. All dimensions of performance management implementation variables are positively correlated and significantly support the Company's performance. Every step of the performance prerequisites, performance planning, implementation, evaluation, review and performance update contributes positively and significantly to the performance of the Company.

5.3 Proposed Improvements

ISO 45001:2018 has a sufficient correlation value to the variable dimensions of work accidents and has a strong correlation to the dimensions of the company's performance. To determine the appropriate steps for implementing improvements, from the results of interviews with Engineers in the Health Safety Environment Division and Quality Assurance Division, it is also based on the correlation value of the dimensions on the ISO 45001:2018 variable, the largest of which is the financial and non-financial variables, namely the Organizational Support dimension. So that improvement is focused on the dimensions of Organizational Support. Because it has a strong correlation value, the dimensions of organizational support in the ISO 45001:2018 variable will affect the company's performance, especially non-financial. To carry out the right improvement steps, the Plan-Do-Check-Action (PDCA) step is used for the improvement implementation process that is being carried out. The steps taken are as follows:

• Planning to build a team with elements of factory management, HSE Division, safety officers, employees, vendors and union representatives.

• Make a schedule of K3 inspections for each department within the scope of the division area initiated by employees/safety officers within the factory operating division.

• Conduct weekly K3 inspections for each service within the divisional area.

• Recording inspection findings, namely unsafe conditions and unsafe actions.

• Conducting meetings related to the improvement of findings of unsafe conditions and unsafe actions.

6. Conclusion

From the studies that have been done and based on the proposed hypothesis using the Smart PLS method, the relationship between the variables obtained are:

• The relationship between ISO 45001: 2018 has a positive and significant correlation with work accidents.

•The relationship between performance management and work accidents is insignificant.

• The relationship between the implementation of ISO 45001: 2018 on the Company's performance is a positive and significant correlation.

• The relationship between Work Accidents and Company performance is insignificant.

• The relationship between the implementation of Performance management to the performance of the Company is a positive and significant correlation.

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