

### 3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan

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#### Abstract

**Introduction:** Based on ILO data, 2018 shows that every year 13.7% workers die as a result of accidents or diseases, even though employee is one of the most important human capital assets in company. Occupational Health and Safety (OHS) Factors managed with applicable regulations. ISO 45001 is an International Standard that regulates the requirements for the OHS Management System. In Indonesia we called it OHS. All sub-systems OHS aim to prevent any unwanted incidents. **Objective:** To determine integration between ISO 45001:2018 and OHS clauses and determine analysis regarding application of OHS on criteria 1.1 and 1.2 at PT. X. **Method:** Research method uses qualitative research with a gap analysis approach. **Result and Discussion:** The research results show that ISO 45001:2018 clause that most relevant to the OHS criteria is clause 8 with 16 equal clauses, while least relevant clause is clause 4 with 1 equal clause. As for the results of gap analysis for application of criterion 1.1 at PT.X 60% do not require CAPA while the application of criteria 1.2 80% does not require CAPA. **Conclusion:** Not all clauses of ISO 45001:2018 and OHS criteria can be integrated. Application of OHS criteria 1.1 and 1.2 at PT. X is good.

**Keywords:** Integration; OHS; Gap Analysis;

## **Introduction**

The use of advanced technology in manufacturing activities is needed to facilitate the production process and accelerate the fulfillment of the needs of consumers or the wider community. The production process using advanced technology will provide convenience in the production process, so that these conditions can cause unavoidable side effects such as increasing the number of sources of danger for the users of the technology itself. In addition, Occupational Health and Safety (OHS) requirements that are not met by work environmental factors, unsafe work processes, and increasingly complex work systems can pose a separate threat to worker safety and health (Marlina & Rizal, 2016)

The death rate due to work accidents and work-related diseases is quite high. Data from the International Labor Organization (ILO, 2018) shows that every year around 380,000 workers or 13.7% of the 2.78 million workers die as a result of workplace accidents or work-related illnesses. And more than 374 million people are injured, injured or fall sick every year as a result of accidents that occur with workers. Meanwhile, based on BPJS Employment data, the number of Work Accidents reached 221,740 cases in 2020 and this number increased to 234,370 cases in 2021 and 265,334 cases to with November 2022.

One important factor that needs to be considered and greatly influences Occupational Health and Safety must be managed according to applicable Occupational Health and Safety regulations related to manufacturing activities such as operations, production processes, logistics activities, human resource activities (workers and management), financial management activities, as well as product distribution and marketing activities (Marlina & Rizal, 2016). Occupational Health and Safety is a must to be carried out by work organizers to increase company productivity, as well as protect workers from things that threaten safety and health (Yuliandi & Ahman, 2019)

ISO 45001 is an International Standard that regulates the requirements for the Occupational Health and Safety Management System (OHS). So that it can be said that ISO 45001 is an ISO that discusses specific guidelines for the OHS system. OHS is part of the overall company management system in order to control risks related to work activities in order to create a safe, efficient and productive workplace (PP No. 50 of 2012) (Herlinawati & Zulfikar, 2017). Occupational Health and Safety is an important issue in every operational process described in the Occupational Health and Safety Management System (OHS) (Tarigan, 2021). Integration between ISO 45001:2018 and OHS criteria is needed to see similarities, differences, and alignment between international and national standards.

All sub-systems in OHS in industrial environments aim to carry out planning, handling, and identifying OHS risks that exist in industrial work environments so that any unwanted events or activities that can cause losses can be prevented (Sholihah, 2018). Basically OHS looks for and discloses operational weaknesses that allow accidents to occur. Operational errors that cause accidents can not be separated from

### **3 Integration of ISO 45001:2018 Clause with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

incomplete and lacking management practices. System failure causes accidents because basically work accidents are rooted in management

In evaluating the implementation of OHS in the industry, it can be done using the Gap analysis method. The meaning of the word gap literally identifies a difference (disparity) between one thing and another, we usually call it a gap (Yoshana et al., 2022). Gap analysis is commonly used to compare a set of requirements. Gap analysis is generally structured around a set of areas, topics or categories, thus making gap analysis efficient to find out which sectors or areas need improvement (Priadi, 2022). Evaluation of the implementation of OHS needs to be done to minimize work accidents and work-related diseases as small as possible.

Based of the background the author is interested in conducting an analysis regarding "Integration of ISO 45001: 2018 Clause with OHS Criteria and Gap analysis Criteria 1.1 – 1.2 OHS at PT. X.

#### **Method**

The research method used in this study is a qualitative method by conducting a documentation study. The data used comes from secondary data. Secondary data is obtained by searching company documents. In this study, data processing was carried out using two methods, namely integration and gap analysis. The integration of ISO45001: 2018 clause with OHS criteria is carried out by comparing clause and criteria that have the same characteristics.

While the gap analysis method is a comparison between standards and implementation in the field, whether the implementation by the company meets the requirements of the OHS standard. Documents that are traced are used as evidence that the company has implemented according to existing requirements. If a gap is found, it is necessary to determine the Corrective Action and Preventif Action (CAPA). CAPA is used to improve gap analysis. If the gap has been met, then the requirement is appropriate.

#### **Result and Discussion**

##### **Integration of ISO 45001:2018 Clause with OHS Criteria**

The integration of ISO 45001:2018 clauses with OHS criteria is carried out by looking at the suitability between the clauses and the criteria for each standard. The results of the integration of the ISO 45001: 2018 clause with the OHS criteria can be seen in table 1 below.

### 3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan

**Tabel 1**

Integration of ISO 45001:2018 Clause with OHS Criteria

No.	Clausula	ISO 45001:2018	Criteria	OHS
1. Building and Maintaining Commitments				
1.	5.2	EHS Policy	1.1	OHS Policy
	5.3	Organizational roles, responsibilities, and authorities	1.2	Responsibility and Authority to Act
	9.3	Management review	1.3	Review and Evaluation
	5.4	Consultation and Participation of Workers	1.4	Workforce Engagement and Consultation
2. Making and Documenting OHS Plans				
2.	6.1.4	Planning Action	2.1	OHS Strategic Plan
	4.4	OH&S Management System	2.2	OHS Manuals
	6.1.3	Determination of legal requirements and other requirements	2.3	Legislation and other requirements in the field of OHS
	9.1.2	Evaluation of Compliance		
	7.3	Awareness		
	7.4.2	Internal Communication		
	7.4.3	External Communication		
3. Design Control and Contract Review				
3.	8.1.3	Management of change	3.1	Design Control
	8.1.4	Procurement	3.2	Contract Review
4. Document Control				
4.	7.5.3	Control of Documented Information	4.1	Approval, Issuance and Control of Documents
	7.5.2	Creating and updating	4.2	Document Changes and Modifications
5. Product Purchase and Control				
5.	8.1.4	Procurement	5.1	Specifications for Purchase of Goods and Services
			5.2	Purchased Goods and Services Verification System
			5.3	Control of Goods and Services Supplied by Customers
			5.4	Product Traceability
6. Work Security Based on OHS				
6.	8.1.1	General	6.1	Work system
	8.1.2	Eliminating hazards and reducing OH&S risks		
	9.1.1	General	6.2	Supervision
	7.2	Competence	6.3	Selection and Placement of Personnel
	8.1.2	Eliminating Hazard and Reducing OH&S Risks	6.4	Restricted area
	8.1.3	Management of Change	6.5	Maintenance, Repair and Change of Production Facilities
	8.1.4	Procurement	6.6	Service
	8.2	Emergency Preparedness and Response	6.7	Readiness To Handle Emergencies
			6.8	First AID
		6.9	Emergency Planning and Recovery	
7. Monitoring Standard				

### 3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan

No.	Clausula	ISO 45001:2018	Criteria	OHS
7.	6.1.2.1	Hazard Identification	7.1	Hazard Check
	9.1	Monitoring, measurement, analysis, and performance evaluation	7.2	Work Environment Monitoring/Measurement
	9.1.1	General	7.3	Inspection/Inspection, Measurement and Testing Equipment
	9.1	Monitoring, measurement, analysis, and performance evaluation	7.4	Labor Health Monitoring
8. Deficiency Reporting and Correction				
8.	10.2	Incident, Nonconformity, and Corrective Action	8.1	Hazard Reporting
			8.2	Accident Reporting
			8.3	Accident inspection and review
			8.4	Handling problems
9. Management of Materials and Their Transfers				
9.	8.1	Operational Planning and Control	9.1	Manual and Mechanical Handling
			9.2	Transport, Storage and Disposal Systems
	6.1.2.1	Hazard Identification	9.3	Control of Hazardous Chemicals
	Operational Planning and Control			
10. Collection and Use of Data				
10.	7.5	Documented Information	10.1	Note OHS
	7.5	Documented Information	10.2	OHS Data and Reports
	7.4.2	Internal Communication		
11. Inspection OHS				
11.	9.2	Internal Audit	11.1	OHS Internal Audit
12. Skills and Ability Development				
12.	7.2	Competence	12.1	Training Strategy
			12.2	Training for Management and Supervisors
			12.3	Training for Workforce
			12.4	Introductory Training and Training for Visitors and Contractors
			12.5	Special Skills Training

#### Gap analysis Criteria 1.1 – 1.2 OHS at PT. X

##### Criteria 1.1 – OHS Policy

Criteria 1.1 consists of 5 criteria, include: Criteria 1.1.1: There is an OHS policy that is written, dated, signed by the employer or management, clearly stating the goals and objectives of OHS and a commitment to OHS improvement; Criteria 1.1.2: Policies are drawn up by employers and/or administrators after going through a consultation process with representatives of the workforce; Criteria 1.1.3: The company communicates the OHS policy to all workers, guests, contractors, customers and suppliers in an appropriate manner; Criteria 1.1.4: Special policies are made for special OHS issues; and Criteria 1.1.5: OHS policies and other special policies are reviewed periodically to ensure that these policies are in accordance with changes that occur within the company and in statutory regulations.

### 3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan

**Table 2**

Details of gap analysis criteria 1.1 OHS

Criteria	Condition	Objective Evidence	Corrective Action/Preventif Action
1.1.1	There is a OHS policy that is written, dated, signed by the entrepreneur or administrator, clearly stating the goals and objectives of OHS and the commitment to improving OHS.	OGN Pandaan already has a written OHS policy with no. document DOC-21096, dated 09 November 2022, signed by the Plant Director (Andri Soelastyo), clearly states the goals and objectives of OHS (Paragraph 1) and commitment to improvement of OHS (What is stated in point 9 - Continuous improvement)	-
1.1.2	Policies are drawn up by employers and/or administrators after going through a consultative process with representatives of the workforce.	<ul style="list-style-type: none"> <li>- In preparing the HSE policy, OGN has held discussions with the SHE team, ISO team, Plant Director and management.</li> <li>- Consultations with labor representatives have not been carried out officially.</li> </ul>	<p><b>(CA)</b> Conduct meetings with union representatives to communicate as well as review the contents of OGN's HSE policy.</p> <p><b>(PA)</b> Updating the SHE Diary on SHE Policy review activities by adding information in the report &amp; evidences column regarding the involvement of trade union representatives when conducting SHE Policy reviews.</p>
1.1.3	The company communicates OHS policies to all workers, guests, contractors, customers and suppliers in the right manner.	<p>OGN Pandaan has communicated the OHS policy to.</p> <ul style="list-style-type: none"> <li>- Labor via: SBC Tier Card (week 34 2022), email dated 22 November 2022 by Organon_ind@organon.com, SHE sharepoint, standing banner, poster, ETQ document (doc number DOC-21096)</li> <li>- Guests, contractors and suppliers through: safety induction videos and SHE policy standing banners</li> <li>- Customers and the general public via: There is no continuous communication system available yet</li> </ul>	<p><b>(CA)</b></p> <ul style="list-style-type: none"> <li>- Uploading HSE policies to the Organon Indonesia website which can be accessed by the general public.</li> <li>- Attach visitor card with SHE policy</li> <li>- Update the contents of the safety induction video</li> <li>- Re-communicate to all employees</li> <li>- Updated visitor cards</li> </ul>
1.1.4	Special policies are made for special OHS issues.	OGN Pandaan has a special OHS policy which is summarized in the SHE MS manual (Doc number F-09840-DOC), P2 HIV program, P2 Covid-19	-

**3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis  
Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

<b>Criteria</b>	<b>Condition</b>	<b>Objective Evidence</b>	<b>Corrective Action/Preventif Action</b>
1.1.5	OHS policies and other special policies are reviewed periodically to ensure that these policies are in accordance with changes that occur within the company and in laws and regulations.	<ul style="list-style-type: none"> <li>- OGN Pandaan has conducted regular reviews regarding OHS policies and other special policies once every 3 years following the ETQ procedure (Doc number PR-01112-DOC, Local Management Process Procedure in the ETQ Document Control module).</li> <li>- Evidence of reviewing OHS policy records and other special policies can be seen in the monthly OHS review management presentation material (Tier 5 slide)</li> <li>- Evidence of OHS policy review and other special policies at the ISO meeting clause 5.2 in the consultation document with the consultant</li> </ul>	-

**Criteria 1.2 – Gap analysis Criterion 1.2 Responsibility and Authority to Act**

Criterion 1.2 consists of 7 criteria, namely Criterion 1.2.1: Responsibility and authority to take action and report to all parties involved in the Company in the field of OHS have been determined, informed and documented; Criterion 1.2.2: Appointment of person in charge of OHS must comply with statutory regulations (organizational structure; P2OHS; Hyperkes doctor, emergency response team); Criterion 1.2.3: Work unit leaders within a company are responsible for OHS performance in their work units; Criterion 1.2.4: Entrepreneurs or administrators are fully responsible for ensuring the implementation of OHS; Criterion 1.2.5: Officers responsible for emergency response have been identified and trained; Criterion 1.2.6: The company obtains suggestions from experts in the field of OHS from within and/or outside the company; Criterion 1.2.7: OHS performance is included in the company's annual report or other reports at the same level.

**Table 3.**

### 3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan

Details of gap analysis criteria 1.2 OHS			
Criteria	Condition	Objective Evidence	Corrective Action/Preventif Action
1.2.1	Responsibilities and authorities to act and report to all parties involved in the Company/Plant/Division in the field of OHS have been determined, informed, and documented	<ul style="list-style-type: none"> <li>- OGN Pandaan is committed to having the responsibility and authority to take action and report to all parties involved in the Company in the field of OHS, as stipulated in the document SHE Responsibility, Accountability, Commitment, and Authority (PR-05286-DOC), and training standards investigation (SOP-EHS-06), worker job description (OHS aspect),</li> <li>- Documents of responsibility and authority have been informed to employees through Training Investigation SOP-EHS-06)</li> </ul>	-
1.2.2	The appointment of the person in charge of OHS must comply with the laws and regulations (organizational structure; P2OHS; Hyperkes doctor, emergency response team)	<ul style="list-style-type: none"> <li>OGN Pandaan has appointed a person in charge of OHS according to laws and regulations which consists of:               <ul style="list-style-type: none"> <li>- Organizational structure (document oct 2022)</li> <li>- P2OHS in the Decree of the Head of Manpower Office No 566/234/P2OHS/108.5-PSN/V/2019 concerning ratification of P2OHS in companies</li> <li>- The company doctor is stated in the company doctor's contract (proof of contract has not been provided)</li> <li>- Emergency response team on the document Emergency call and Emergency Management Organization (PR-05813-DOC)</li> </ul> </li> </ul>	<b>(CA)</b> <ul style="list-style-type: none"> <li>- Updating the company's organizational structure</li> <li>- Updating the company's P2OHS with the new Director Plant and management</li> <li>- Asking for a hyperkes doctor contract</li> </ul>
1.2.3	Head of work unit in a company is responsible for OHS performance in their work unit	OGN Pandaan is responsible for OHS performance in their respective units, as stated in the job description for the supervisor level in ETQ	-
1.2.4	Entrepreneurs or administrators are fully responsible for ensuring the implementation of OHS (OHS Program signed by Plant/Div. Manager)	OGN Pandaan has fully guaranteed the implementation of OHS contained in the Plant Director job description at point b of the Principle Objective of Position (PR-22287-DOC) & SHE MS Manual point 5.1 regarding leadership and commitment	-



**3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis  
Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

Criteria	Condition	Objective Evidence	Corrective Action/Preventif Action
1.2.5	Officers responsible for handling emergencies have been assigned and received training.	OGN Pandaan has formed an IRT officer who is responsible for handling emergencies, determined through the Emergency call document and the Emergency Management Organization (PR-05813-DOC), received training (documentation evidence)	-

**Discussion**

**Integration of ISO 45001:2018 Clause with OHS Criteria**

Based on Table 1 it can be seen that the structure of ISO 45001:2018 is very different from that of OHS, although most of the content remains the same. The ISO 45001:2018 clause contains more general requirements, while the OHS criteria contain more detailed requirements. So that not all OHS criteria are contained in the ISO 45001:2018 clause and vice versa.

After integrating the ISO 45001:2018 clauses with the OHS criteria, the result is that the ISO 45001:2018 clauses that are most relevant to the OHS criteria are in clause 8 which contains Operations (with 16 relevant clauses) and clause 7 which contains Support. (with 10 relevant clauses). The Operations section contains the company's operational planning and risk control as well as efforts to handle emergencies (Rachmanto & Rafsanjani, 2021). Where as the Support section contains various components of supporting resources in the running of a company such as company resources, human resource competencies, internal and external communications, to information about documentation.

Meanwhile, the clause that is least relevant when integrating ISO 45001:2018 clauses with OHS criteria is clause 4 regarding the organizational context (with 1 relevant clause), clause 5 which contains leadership and employee participation (with 3 relevant clauses), as well as clause 10 which contains improvement or continuous improvement within a company (with 4 relevant clauses).

So based on this it is known that the application of OHS focuses more on the company's supporting components and also the company's operational activities. This is in accordance with research conducted by Tarigan, 2020 where Occupational Health and Safety is an important issue in every operational process described in the Occupational Health and Safety Management System (OHS) (Tarigan, 2021)

The function of integrating the clauses of ISO 45001:2018 with the OHS criteria is to see the relationship and linkages between standards. So that the concepts can be interconnected with one another in various ways according to needs. In addition, it is hoped that integration can produce overall standard improvements that can complement one another so that the results obtained can be more precise and accurate (Kurniawan et al., 2017). More precise and accurate is meant in the context of implementing standards

### **3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

at companies which are expected to serve as a framework that can improve worker safety standards, so as to reduce work risks and create better and safer working conditions (Darmawati, 2018).

#### **Gap analysis Criteria 1.1 – 1.2 OHS at PT. X**

##### **Criteria 1.1 – OHS Policy**

Based on Table 2 it is known that the application of criterion 1.1 which contains OHS policies that have been implemented at PT. X is good enough. This was obtained by 60% or 3 of the 5 criteria that did not require corrective action or preventive action. Where this indicates documentary evidence and the implementation by the company of criteria 1.1 has been carried out and fulfilled properly.

However, for the 2 criteria that still need to be carried out corrective action and preventive action efforts are in criterion 1.1.2 where corrective action efforts are needed in the form of meetings with union representatives to communicate as well as review the contents of OHS policy. The role of workers in the formulation and review of OHS policies is necessary because every worker or other person within the scope of the workplace must participate in maintaining and controlling Occupational Health and Safety in the company (Pangkey et al., 2012)

Meanwhile preventive action efforts so that this incident does not recur are carried out by updating the SHE Diary on SHE Policy review activities by adding information in the report and evidence column regarding the involvement of trade union representatives when conducting SHE Policy reviews.

Then in criterion 1.1.3 a corrective action effort is needed in the form of updating the contents of the safety induction to adapt to the current situation, updating the visitor card by adding the SHE policy so that guests, contractors and suppliers can read and understand the SHE policy in the company. In addition, efforts need to be made to re-communicate related to SHE policies in the company to all employees to refresh and remind workers about the SHE policy in the company.

##### **Criteria 1.2 – Responsibility and Power to Act**

Based on Table 3 it is known that the application of criteria 1.2 which contains responsibility and authority to act that has been implemented at PT. X is good. It was obtained as much as 80% or 4 out of 5 criteria that did not require corrective action or preventive action. Where this indicates documentary evidence and the company's implementation of criteria 1.2 has been implemented and fulfilled properly.

The criteria that still require corrective action are in criterion 1.2.2 which states that the appointment of a OHS person in charge must comply with statutory regulations. The appointment of the person in charge of OHS at PT. X is in accordance with the applicable law, but there are several corrective actions needed because the organizational structure still uses the 2022 document and the decision letter for P2OHS appointment has not been updated. So that corrective action efforts can be carried out by updating the company's organizational structure and updating the company's P2OHS with the Plant Director and

### **3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

new management. Apart from that, proof of the company's hyperkers doctor contract has also yet to be submitted. The company hyperkes doctor contract document is needed as a basis for evidence that the company has implemented the OHS criteria in accordance with Permenaker 01 of 1976 regarding the obligation to train hyperkes for doctors in companies.

#### **Conclusion**

Based on the results of the research that has been carried out, the results show that the integration between the clauses of ISO 45001:2018 and the OHS criteria does not contain all the clauses and criteria that can be integrated. The results show that the ISO 45001:2018 clause that is most relevant to the OHS criteria is in clause 8 which contains Operations (with 16 relevant clauses) and clause 7 which contains Support (with 10 relevant clauses). Meanwhile, the clause that is least relevant when integrating ISO 45001:2018 clauses with OHS criteria is clause 4 regarding the organizational context (with 1 relevant clause), clause 5 which contains leadership and employee participation (with 3 relevant clauses). , as well as clause 10 which contains improvement or continuous improvement within a company (with 4 relevant clauses).

Meanwhile, the results of the gap analysis for criteria 1.1 and 1.2 for OHS for criterion 1.1 which contain OHS policies that have been implemented at PT. X are, good. This was obtained by 60% or 3 of the 5 criteria that did not require corrective action or preventive action. The recorded gaps are in criteria 1.1.2 and 1.1.3. For criterion 1.2 which contains the responsibility and authority to act that has been implemented at PT. X is good. It was obtained as much as 80% or 4 out of 5 criteria that did not require corrective action or preventive action. The recorded gaps are in criterion 1.2.2.

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Nabilah Khanza Furtina, Noeroel Widajati/**KESANS**  
**3 Integration of ISO 45001:2018 Clausula with OHS Criteria and Gap Analysis**  
**Criteria 1.1 – 1.2 OHS In PT. X Pasuruan**

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