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EVALUATION OF THE APPLICATION OF SMK3 IN PCI GIRDER ERECTION WORK USING A CRAWLER CRANE

(Case Study: Construction of Probolinggo - Banyuwangi Toll Road Package 1 Sta - 3+881 - Sta 09+00 At Bridge Sta -3+256 Span 40.8 Meters)

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Abstract

The Occupational Safety and Health Management System (SMK3) is a comprehensive framework that is used to regulate various activities and manage occupational safety and health (K3) in a systematic manner. In the context of the Probolinggo Banyuwangi Toll Road Development Project Package 1, the implementation of SMK3 was assessed to determine the level of implementation, identify factors that influenced the implementation, and propose corrective actions. The assessment was conducted based on 166 criteria that were outlined in PP No. 50 of 2012, which is a regulation that governs occupational safety and health in Indonesia. Out of these 166 criteria, it was found that 149 criteria were fulfilled, accounting for a compliance rate of 89.76%. However, there were 17 criteria that were not met, resulting in a non-compliance rate of 10.24%. These non-compliant criteria were categorized as minor issues.Overall, the implementation level of SMK3 in the Probolinggo Banyuwangi Toll Road Development Project Package 1 was deemed satisfactory, as the majority of the criteria were fulfilled. The project also demonstrated adherence to relevant laws and regulations, further confirming its commitment to occupational safety and health. Based on the assessment findings, corrective actions can be proposed to address the non-compliant criteria and improve the implementation of SMK3. These actions may include providing additional training and resources, enhancing communication and coordination among stakeholders, and implementing stricter monitoring and evaluation mechanisms.

Keywords: *Analysis, Implementation of SMK3, Health Management System*

1. INTRODUCTION

The construction of the Probolinggo-Banyuwangi Toll Road phase I, spanning 49.68 km, has commenced under the Ministry of Public Works and Public Housing (PUPR). PUPR Minister Basuki Hadimuljono laid the first stone (Groundbreaking) on Monday (6/2/2023) in Pendil Village, Suko District, Probolinggo Regency, East Java Province. Minister Basuki highlighted that this toll road, with a total length of 175.40 km, is the final section of the Trans Java Toll Road, connecting Banten, West Java Province to East Probolinggo, East Java Province. The toll road is expected to enhance the transportation of people, goods, and services from Banten to Banyuwangi, thereby boosting the local economy.

Minister Basuki announced that the Probolinggo-Besuki section, with an investment value of Rp10.7 trillion, is now ready to be restarted. This section is the final part of the Trans Java Toll Road, connecting the western and eastern ends of Java Island. According to Danang Parikesit, the Head of the Toll Road Regulatory Agency, the

construction of this toll road section is expected to be completed by 2024 (PARAMPARA, 2018). Danang also emphasized the importance of this section, as it not only completes the Trans Java Toll Road but also contributes to the development of tourism activities in East Java and Bali.

Construction work is a pretty unpredictable field with its fair share of risks. The more complex a project is, the higher the chances of encountering project risks. Project risks are basically uncertainties that come with the possibility of certain events happening, which can have negative impacts on both the physical and financial aspects of the project. These consequences are definitely not what the project wants, as they can hinder the progress and achievement of project goals, such as cost, time, and quality. These risks have the potential to affect the productivity, performance, quality, and cost of the project.

Unexpected risks can arise at any time. Even with thorough planning, there is always a level of uncertainty whether things will go exactly as planned. In the construction industry, it's impossible to completely eliminate risks, but they can be minimized or transferred to other parties (Ervianto, 2023). When risks do occur, they can disrupt the overall project performance, leading to potential losses in terms of cost and time. Construction industry players are now realizing the significance of addressing risk issues in their projects. Failing to accurately predict and handle risks can have negative consequences, both directly and indirectly, on construction projects (Labombang, 2011).

The Minister of Public Works Regulation No. 05/PRT/M/2014 has put in place rules for assessing the level of risk in construction projects, identifying hazards, evaluating risks, prioritizing them, implementing measures to control risks, and assigning responsible individuals. This is to ensure that unwanted incidents are prevented. In order to assess the effectiveness of the Occupational Health and Safety Management System (SMK3) in the installation of a 40.8-meter span PCI Girder using a Crawler Crane for the Probolinggo Banyuwangi Toll Road construction, it is necessary to evaluate its application. By implementing SMK3, workers are expected to carry out their tasks in a safe and healthy manner, while also increasing their awareness of occupational safety and health (K3) (Pangkey et al., 2012).

The main objective of this study is to assess the implementation of SMK3 (Occupational Health and Safety Management System) in the installation of PCI Girder Erection using Crawler Crane, specifically in relation to the regulations outlined in PP number 50 of 2012. The study aims to determine the extent to which SMK3 is being applied in this particular construction process. In addition to evaluating the implementation of SMK3, the research also aims to identify any factors that are not being met in the application of SMK3 based on the regulations stated in PP number 50 of 2012. This could include any gaps or deficiencies in the current practices that do not align with the requirements of the regulation.

Furthermore, the study seeks to analyze the non-compliance of work elements as per PP number 50 of 2012. This involves examining specific aspects of the construction process, such as safety procedures, risk assessments, training programs, and emergency response plans, to identify any areas where non-compliance is occurring. Based on the findings from the evaluation and analysis, the study will propose corrective measures to address the non-compliance of work elements according to PP number 50 of 2012. These corrective measures may include recommendations for improving safety protocols,

enhancing training programs, implementing additional safety measures, or revising existing procedures to ensure compliance with the regulations.

2. RESEARCH METHODS

This research method provides a framework for approaching research activities with a mindset that aims to address the problems at hand. The focus of this research is on project workers involved in the implementation of PCI Girder Erection using Crawler Crane for the construction of Probolinggo - Banyuwangi Toll Road Section 1. The research takes place at the construction project site of the Probolinggo Banyuwangi Toll Road Package 1, specifically at STA -3 + 881 - STA 09 + 900 bridge STA - 3 + 256, which spans 40.8 meters. The research incorporates survey research, interviews, and literature studies to gather information from both the field and existing literature, enhancing the data collection process.

This study was carried out using descriptive qualitative research methods. It utilized two types of data, namely primary data and secondary data. The primary data was collected through field surveys using techniques such as direct observation, interviews, and internal audits based on the assessment criteria for the K3 system implementation in the construction project of Package 1 STA -3 + 881 - STA 09 + 600 bridge STA - 3 + 256 on the Probolinggo Banyuwangi Toll road, which was undertaken by PT Adi Karya (Persero) as the service provider company. On the other hand, the secondary data consisted of the company's K3 structure and supporting documents for the SMK3 application, which were reviewed to evaluate the implementation and improvement of the system.

The individuals included in this study are those directly involved in construction projects or research sites. The research methodology employed is purposive sampling, which involves selecting participants based on specific criteria related to their abilities and knowledge, ensuring they can provide relevant insights on the research topic. The assessment conducted adheres to the guidelines outlined in PP No.50 of 2012, which focuses on the implementation of SMK3. To gather information from the respondents, a checklist questionnaire based on the audit criteria specified in PP No.50 of 2012 is utilized, following a predetermined accuracy measurement pattern. The research is facilitated by various tools such as cameras (for photos and videos), stationery, sound recording devices, and other necessary equipment for data collection in the field.

3. RESULTS AND DISCUSSION

3.1. Analysis result

The audit was conducted using a comprehensive checklist, which can be found in document L-2. This checklist serves as a guide and includes a series of questions and assessments that are designed to evaluate the fulfillment requirements of the Occupational Safety and Health Management System (SMK3) on the Probolinggo Banyuwangi Toll Road Construction Project Package 1 sta-3+881 sta 09+000 (Afan et al., 2022).

To determine the percentage of achievement for the SMK3, a specific calculation formula was utilized (Sidik & Hariyono, 2015). This formula takes into account various

factors and indicators to provide an accurate assessment of the level of compliance with the SMK3 requirements.

The results and analysis of the audit are presented in a clear and organized manner through tables and graphs. These visual representations offer a detailed breakdown of the fulfillment of each of the 12 Audit Criteria Elements, as well as a comprehensive overview of the 166 Criteria Sub Elements.

By utilizing these tables and graphs, stakeholders and decision-makers can easily identify areas of strength and areas that require improvement within the Occupational Safety and Health Management System. This allows for targeted actions and interventions to be implemented to enhance the overall safety and health performance of the Probolinggo Banyuwangi Toll Road Construction Project Package 1 sta-3+881 sta 09+000.

Table 1. Assessment of Implementation of SMK3 Audit Criteria Elements

No	Elemen	Kriteria (Sub Elemen)	Terpenuhi / Sesuai		Tidak terpenuhi / Tidak sesui		
			Jumlah	Persentase (%)	Jumlah		Persentase (%)
					Minor	Major	
1.	Pembangunan dan Pemeliharaan Komitmen	26	25	96,15%	1	-	3,8
2.	Pembuatan dan Pendokumentasian	14	12	85,71%	2	-	14,29
3.	Pengendalian Perancangan dan	8	8	100%	-	-	0
4.	Pengendalian Dokumen	7	5	71,43%	2	-	28,57
5.	Pembelian dan Pengendalian Produk	9	9	100%	-	-	0
6.	Keamanan Bekerja Berdasarkan	41	40	97,56%	1	-	2,44
7.	Standar Pemantauan	17	14	82,35%	3	-	17,65
8.	Pelaporan dan Perbaikan Kekurangan	9	8	88,89%	1	-	11,11
9.	Pengelolaan Material dan	12	9	75,00%	3	-	25,00
10.	Pengumpulan dan Penggunaan Data	6	5	83,33%	1	-	16,67
11.	Pemeriksaan SMK3	3	3	100%	-	-	0
12.	Pengembangan Keterampilan dan	14	11	78,57%	3	-	21,43
	Sub Total	**166**	**149**	**89,76**	**17**	-	**10,24**

The subsequent is a depiction mapping table derived from the outcomes of analysis, evaluation, and audit discoveries on 12 criteria elements encompassing 166 criteria sub-elements (advanced level).

Table 2. Mapping of Criteria Description of SMK3 Audit Results

No.	Elements	Criteria		
		Fulfilled	Not Fulfilled	
			Mn	Mj
1.	Development and Commitment maintenance	1,1,1. 1,1,2. 1,1,3. 1,1,4. 1,1,5. 1,2,1. 1,2,2. 1,2,3. 1,2,4. 1.2.5. 1,2,6. 1,2,7. 1,3,1. 1,3,2. 1,3,3. 1.4.1, 1.4.3, 1,4,4. 1,4,5. 1.4,6, 1.4.7, 1,4,8. 1.4.9,1,4,10. 1,4,11.	1,4,2.	-

2.	Creation and documentation of a hazard and health	2,1,1. 2,1,2. 2,1,3. 1,1,4. 2,1,5. 2,1,6. 2,2,1. 2,3,1. 2,3,2. 2,3,3. 2,3,4. 2,4,1.	2,2,2. 2,2,3.	-
3.	Control of contract design and review	3,1,1. 3,1,2. 3,1,3. 3,1,4. 3,2,1. 3,2,2.3,2,3, 3,2,4.		-
4.	Document Control	4.1.1, 4.1.2, 4.1.3,4.2.2, 4.2.3,	4,1,4. 4,2,1,	-
5.	Purchase	5,1,1. 5,1,2. 5,1,3. 5,1,4. 5,1,5. 5,2,1. 5,3,1.5,4,1. 5,4,2.		-
6.	Work Safety Based on SMK3	6,1,1. 6,1,2. 6,1,3. 6,1,4. 6,1,5. 6,1,6. 6,1,7. 6,1,8. 6,2,1. 6,2,2, 6,2,3. 6,2,4. 6,2,5. 6,3,1. 6,3,2. 6,4,1. 6,4,2. 6,4,3. 6,4,4. 6,5,1. 6,5,2.6,5,3. 6,5,4. 6,5,5. 6,5,6. 6,5,7. 6,5,9. 6,5,10. 6,6,1. 6,6,2. 6,7,1. 6,7,2. 6,7,3. 6,7,4. 6,7,5. 6,7,6. 6,7,7.	6,5,8.	-
7.	Monitoring Standard	7,1,1. 7,1,2. 7,1,3. 7,1,5. 7,1,6. 7,1,7. 7,2,1. 7,3,1. 7,3,2. 7,4,1. 7,4,2. 7,4,3. 7,4,4. 7,4,5.	7,1,4. 7,2,2. 7,2,3.	-
8.	Reporting and Remediation	8,1,1. 8,2,1. 8,3,2. 8,3,3. 8,3,4. 8,3,5. 8,3,6. 8,4,1	8,3,1.	-
9.	Matrial Management and The move	9,1,1. 9,1,2. 9,1,3. 9.1.4, 9,2,1. 9,2,3. 9,3,3. 9,3,4. 9,3,5	9,2,2. 9,3,1. 9,3,2.	-
10.	Collection and Service User	10,1,1.10,1,2. 10,1,3. 10,1,4. 10,2,1.	10,2,2.	-
11.	SMK3 Audit	11,1,1. 11,1,2. 11,1,3.		-
12.	Development Skills and Ability	12,1,1. 12,1,2. 12,1,3. 12,1,4. 12,1,5. 12,1,6. 12,2,1. 12,2,2. 12,3,1. 12,4,1. 12,5,1.	12,1,7. 12,3,2. 12,3,3.	-
166 Criteria		**149**	**17**	**-**

Table 2 presents the results, indicating that there are a total of 149 implementation criteria, which consist of 166 Audit Criteria Sub Elements. Among these criteria, 17 are found to have inappropriate or unfulfilled implementation, falling under the category of Minor Category.

3.2. Discussion

Based on the results of the analysis and assessment of the audit carried out, it is known that the number of fulfillment of the application of 12 Criteria Elements consisting of 166 Audit Criteria Sub-Elements is 149 Criteria fulfilled / appropriate and 17 Criteria are not fulfilled / not appropriate (Minor Category), these results are then used to determine the percentage value of fulfillment of the level of achievement based on the provisions listed in PP No. 50 of 2012 concerning the Implementation of the Occupational (ILO, 2013)Safety and Health Management System (SMK3) using the following calculation formula:

a. Suitability Level

Implementation Achievement Level = (149/166) x 100% = 89.759%

b. Level of non-conformity (Minor and Major)

Non-conformance rate = (17/166) x 100% = 10.24%

The results of the calculation of the application assessment above can be described as follows:

a.	audit criteria	: Advanced level (166 criteria)
b.	total met	: 149 criteria
c.	total not met/compliant	: 17 criteria
	- minor nonconformities	: 17 criteria
	- major non-conformity	: - criteria
d.	Achievement level	: 89,76%
e.	Level of non-conformity	: 10,24%
f.	Level of applicability	: Satisfactory

The level of achievement of implementation, as outlined in PP No.50 of 2012, is measured based on the provisions of laws and regulations. This includes the assessment of the level of implementation, which falls within the range of 85-100% and is considered satisfactory. These provisions can be found in Table 1.

In the case of the Probolinggo Banyuwangi Toll Road Construction Project Package 1 sta-3+881 sta 09+000, the implementation of the Occupational Safety and Health Management System (SMK3) is in compliance with the applicable laws and regulations. This is supported by the results of the audit, which indicate a percentage value of 89.76% for the appropriate application of the system. Additionally, there were findings of discrepancies, amounting to 10.24% of the total, which fall under the Minor Category (Hakim, 2016).

In relation to the evaluation outcomes of the application assessment and the findings derived from the SMK3 Audit conducted on the Probolinggo Banyuwangi Toll Road Construction Project Package 1 sta-3+881 sta 09+000, the company can proceed with additional responses and enhancement measures to effectively execute SMK3 in order to comply with legal regulations, rectify any errors, prevent work-related accidents, and ensure the safety of workers involved in the construction projects. These actions can be elaborated in the table provided, outlining the specifics in a comprehensive manner.

Figure 1. The detail of construction projects

No	Elemen dan Sub Elemen	Pemenuhan/ Dokumenn teerkait	Faktor pemennuhan penerapan	Dampak	Tindakan/ Respon: Pencegahan	Tindakan/ Respon: Perbaikan
1	Pembangunan dan Pemeliharaan Komitmen:					
1.4	Keterlibatan dan Konsultasi dengan Tenaga Kerja:					
1.4.2	Terdapat perosedur yang memudahkan konsultasi menngenai perubahan yang mmpunyai implementasi terhadap K3	Prosedur tersebut dapat beberapa pedoman atau tata cara atau tahapan penyampayan masalah/issue K3 akibat perubhan di tempat krja. Prubahan yg di maksud bisa tmpat kerja, cara krja, alat dan bahan yg dirasa pekerja mmbahayakan dirinya	tidak ada prosedur khusus sebagai penyampaian Implementasi K3	kecelakaan kerja akibat tidak adanya prosedur K3 pada tiap'' perubahan dalam tempat kerja, alat dan bahan	Membuat dan mengevaluasi format prosedur K3 pada tiap perubahan dalam item pekerjaan, tempat kerja, alat dan bahan menjadi sesuai dan benar	Mengimplementasikan format prosedur k3 yang sesuai dan benar (seperti SOP penggunaan Alat, APD dan prosedur tanggap bahaya dan P3K
2	Pembuatan dan Pendokumentasian Rencana K3:					
2.2	Manual SMK3:					
2.2.2	Terdapat manual khusus yg bekaitan dengan produk, prosess, atau tempat kerja tertentu.	Dokumen berupa manual khusus (misal manual u/ pengelolan Bahan Kimia, Limbah, Manual untuk Ergonomi, manual penangnan bahan peledak dll).	Tidak adanya manual khusus yang mengatur terkait limbah kontruksi (Batu,kayu, logam,minyak .,dll)	-Tercemarnya lingkungan kerja pasca pembangunan (sisa material pasca pekerjaan) yang berdampak pada pemandangan , rusaknya lokasi pekerjaan	Membuat dokumen yang mengatur tentang tata cara pengelolaan limbah pasca kontruksi s.d pemeliharaan	Mengimplementasikan tata cara pengelolahan limbah kontruksi sesuai dengan dokumen manual khusus yang ada seperti prosedur pembuangan sisa material yang tak terpakai dan pengendaliannya
2.2.3	Manual SMK3 mudah di dapat oleh semua prsonil dalam perusahaan sesuai kebutuhan	Manual di simpan pada lokasi yg mudah di akses oleh personel perusahaan, untuk membuktikannya dapat dilihat dari lembar disteribusi manual	Penempatan kotak P3K dan APAR yang tersembunyi atau sulit di akses	•terlambatnya penanganan pengobatan awal pada korban dan penanganan kejadian kebakaran	Mempermudah akses kepada pengguna dengan membuat rambu petunjuk ke kotak P3K dan APAR.	Menempatkan Kotak P3K dan APAR pada tempat'' yang mudah di jangkau dan aman, tanpa menguncinya
4	Pengendalian Dokumen					
4.1	Persetujuan, Pengeluaran, dan Pengendalian Dokumen					
4.1.4	Dokumen usaang segera disingkirkan dari pennggunaannya sedangkan dokumen usang yg di simpn untuk keperluan tertntu di beri tnda kusus	Perusahaan harus memastikn bahwa dokumn K3 yg sednng beredar adalah dokumen terbaru/revsi terakhir. Bila dismpan maka diberi tanda misal kan "obsolute"	Tidak ada tanda khusus yang membedakan antara dokumen usang dan dokumen terbaru/revisi	•Tercampurnya dokumen lama dengan dokumen yang baru •Menemukan kesulitan pada saat dokumen tersebut diperlukan pada waktu tertentu	Memberi penamaan dan tanda khusus pada dokumen untuk mempermudah pengambilan dokumen	Menempatkan dokumen yang terpakai dengan aman dan nyaman serta membuang dokumen yang tak terpakai (usang)
4.2	Perubahan dan Modifikasi Dokumen					
4.2.1	Terdapat sistem untuk membuat, menyetujui perubahan terhadap dokumen K3	Terdapat perosedur pengendalian dokumen yang mencakup tahapan prosess pmbuatan dan persetujuan perubahan dokumen	Implementasi 5R dan komitmen tertib APD pada kawasan proyek, hanya di lakukan oleh Staff yang bukan Ahli tanpa adanya persetujuan bersama oleh para pihak	Kurangnya kesadaran untuk menjaga komitmen 5R dan kurangnya perlengkapan APD khusunya pada para pekerja	Membuat Berita Acara komitmen bersama terkait 5R dan K3 dengan di TDDi/di setujui okeh para pimpinan tertinggi di bidangnya.	Menerapkan kebijakn k3 yaitu 5R dan APD proyek dengan hukum yang sama tanpa terkecuali
6	Keamanan Bekerja Berdasarkan SMK3					
6.5	Pemliharaan, Pebaikan, dan Perubahn Sarana					
6.5.8	Apabila diperlukan dilakukan penerapan sistem pnguncian pengoprasian (lockout system) untuk mencegah agar sarana produksi tidak di hidupkan sebelum saatnya	Terdapat mekanisme penguncian (liht bentuk/sistem penguncian yang digunakan) terkait dengan perosedur pmeliharaan/perbaikn atau perosedur LOTO (Lockout)	Terdapat alat elektronik di dalam ruagan yang masih menyala tanpa awak (AC , PC dan charger)	Dapat terjadi konsleting listrik karena penggunaan daya eletronik yang lama	Memberikan peringatan dengan lisan dan rambu untuk mematikan barang elektronik sebelum meninggalkan ruangan.	Membuat alat control otomatis terhadap penggunaan peralatan elektronik
7	Standar Pemantauan					
7.1	Pemeriksan Bahaya					
7.1.4	Daftar priksa (check list) tempat kerja telah disusun untuk digunakan pada saat pemeriksaan/insepeksi.	Terdapat daftar checklist yang sesuai pedoman dan keburtuhan untuk personil dan non personil	Tidak adanya format checklist untuk mengontrol daftar pekerja dan inventaris kerja	•resiko temuan oleh tim auditor yang berdampak pada kerugian perusahaan	Menyusun dan membuat daftar periksa sesuai dengan kondisi tempat kerja seperti absensi, daftar alat, serta dokumen penting	Membuatkan absensi finger print dan menyiapkan daftar alat dan dokumen penting yang di perlukan jika ada pemeriksaan internal maupun eksternal
7.2	Pemantawan/ Pengukurn Lingkungn Krja					
7.2.2	Pemantauan/ pengukuran lingkungan kerja meliputi faktor pisik, kimia, biolgi, ergonmi dan sikologi.	a. Liat pada Kepmenker 51/MEN/1999 tntang Nlai Ambanng Batas Faktr Fisika (Kebisingn, suhu krja, getran, glombang micro dan radasi ultrapiolet) ditempat kerja c. Faktor biolgis mislnya nlai baku mtu air minm, pengawasn, terhadp kwalitas makann kariawan, dll	-Terbengkalinya material sisa pekerjaan (batu,semen,kayu, plastic dll) dan adanya bekas galian pondasi yang belum di tutup kembali	Sisa material Rawan kebakaran dan polusi terhadap lingkugan sekitar dan rawan kecelakaan orang terperosok terhadap sisa lubang galian yuang belum di tutup	-memberikan SOP terkait lubang galian dan alat atau orang sebagai control pengawas	Melakukan pengolahan limbah sisa material untuk bisa lebih di manfaatkan kembali dan menutup kembali lubang galian
7.2.3	Pemantaua/ pengukuran lingkungan kerja di lakukan oleh petugas atau pihak yg berkompeten dan berwewenang dri dlm dan/atau luar perusahaan.	Dapat dilkukan oleh PJK3 atau pihak lain/prsonil yng telah mendaptkan izin atau bersertifikasi, berkompeten dan ahli dalam pengendaliang lingkungan hidup	Terdapat beberapa personil tenaga ahli (pengawas dan teknisi khusus) yang tidak mempunyai sertifikasi tetapi kompeten dan sebaliknya	Rawan kecelakaan kerja dan pencemaran lingkungan yang di sebabkan oleh tenaga ahli yang bersertifikasi namun tidak berkompeten	Melakukan audit dan tes pada personil khusus sebelumn di pekerjakan - kebijakan checklist sertifikasi - materi uji kepada calon pekerja - kebijakan terhadap implementasinya	Memperkerjakan petugas yang berkompeten dan bersertifikasi
8	Pelaporan dan Perbaikan Kekurangan					
8.3	Pemriksaan dan pengkajiyan Kecelakan					
8.3.1	Tempat kerja/ perusahaan mempunyai prosedur pemriksaan dan pengkajiyan kecelakan kerja dan penyakit akibat kerja.	Pedoman/ SOP terkait prosedur pemeriksaan dan penanganan kecelakaan kerja dan penyakit	Tidak pernah dilakukan medical check up dan sosialisasi kepada pekerja seperti pelatihan P3	-Tingkat keparahan pada korban kecelakaan karena tidak mendapat P3 - penyebaran virus penyakit yang meluas di lingkungan kerja (virus corona)	- membuat prosedur dan pengecekan sebelum masuk area kerja penangan	-Melakukan pengecekan suhu badan (cek medis) sebelum memasuki area kerja - serta membuat pelatihan P3 dalam antisipasi kecelakaan kerja
9.2	Sisstem Penganngkutan, Peyimpanan dan Pembuangn					
9.2.2	Terdapt perosedur yng menjelaskan persyaratan pengendalian bahan yang dapat rusak atau kadaluarsa.	- Bahn-bahan yg ditangani sesuai dengn peraturan perundangan seperti penyimpanan bahan peledak, penyimpanan gas-gas dengan tabung atau bejana	-Tidak adanya prosedur penangann terhadap material dan alat yang mempunyai resiko bahaya tinggi dan tenaga khusus dalam mengolah alat , Material dan bahan bakar untuk alat berat	Resiko human eror yang menyebabkan kecelakaan kerja dan rusaknya alat di karenakan kurang kompeten nya petugas yang menangani	Membuat prosedur pengendalian bahan yang dapat mudah rusak atau kadaluarsa	Membuat SOP sesuai perarturan -Aplikasi penerapan SOP dan pengawasan
10	Pengumpuln Dan Pennggunaan Data					
10.2	Data dan Laporan K3					
10.2.2	Laporan rutin kinrja K3 dibuat dan disebrluaskan di dalm tempat krja.	Laporan rutin K3 misalya: laporan yg berhbungan dengn kinrja K3 termsuknya didalm monnitoring terhadp perogram K3	Laporan kinerja K3 tidak di sosialisasikan dan tidak di tindak lanjuti	Kesulitan pada saat melakukan evaluasi perbaikan dikarenkan tidak adanya prosedur yang dilakukan secara rutin di lingkungan kerja	Membuat laporan rutin K3 untuk disebarluaskan di dalam tempat kerja sebagai evaluasi terhadap kinerja program K3.	Membuat laporan K3 secara berkala -membuat laporan K3 - tindak lanjut terhadap hasil laporan K3 -rapat TinjauanMnagemen untuk mengevaluasi tindak lanjut laporan K3
12	Pengembangan Ketrampilan dan Kmampuan					
12.1	Setrategi Platihan					
12.1.7	Perogram pelatihn dtinjau secara teratur untuk menjamin agar tetap relevan dan epektif.	Pada prosedur pelatihan ada tahapn dimana semua perogram platihan slama 1 tahun dievaluasi untk mnentukan apakh masih relvan atau prlu pningkatan lebih lanjut. Termsuk perosentasi kberhasilan pelatihan yang tlah diikuti.	Tidak adanya prosedur Pelaksanaan program pelatihan yang dilakukan perusahaan untuk melakukan evaluasi dikarenakan program kerja yang dilaksanakan tidak terlalu lama.	- Keterbatasan keterampilan pekerja -Tidak adanya peningkatan kinerja karyawan dikarenakan tidak adanya prosedur sebagai penunjang efektifitas dari pekerja	Penijauan pelatihan bagi tenaga kerja secara teratur agar tetap relevan dan efektif	Perusahaan memfasilitasi pekerja untuk mengikuti pelatihan / pendidikan khusu yang berlisensi untuk dapat meningkatkan produktivitas perusahaan
12.3	Pelatihan Bagi Tnaga Krja					
12.3.2 12.3.3	Pelatihan diberikn kepada tenaga kerja apabila di tempat kerjanya terjdi prubahan sarana peroduksi atau peroses. Pengusaha atau pengurus memberikan pelatihan penyegaran kepada semua tenaga kerja	Pemberitahuan ter update kepada karyawan terkait perubahan sarana atau penggantian alat baru. -Mapping Pelatihan penyegaran ini tergntung kebuthan/ persaratan yg ada. Mislnya platihan tanggp darurt 1 thn skali, platihan P3K, platihan B3 dll	Tidak adanya prosedur pelatihan bagi tenaga kerja, ketika ada perubahan sarana dan kebijakan di dalam perusahaan (assembly point, smoking area) Tidak ada kegiatan pelatihan sebagai penyegaran pegawai (latihan tanggap darurat, P3)	- tanggap darurat serta adapatasi karyawan pada sarana produuksi baru yang membuat kerugian pada perusahaan - memperburuk keadaan jika terjadi bencana dan kecelakaan - kerugugian pada perusahaan	Memberikan pelatihan penyegaran kepada tenaga kerja berupa tanggap darurat ketika terjadi gempa,kebakaran dl Membuat mapping area dan prosedur jadwal pelatihan tanggap darurat dan P31	-Mapping area perubahan - melatih karyawan sebelum adanya perubahan -pengawasan pada teknologi baru -melakukan pelatihan tanggap darurat dan P3K

After conducting the audit and analysis, it is evident that there are several factors contributing to the non-compliance of the Occupational Safety and Health Management System (SMK3) in the Probolinggo - Banyuwangi Toll Road Construction Project Package 1 Sta. -3+881 - 09+000. These factors include the absence of necessary documents and procedures for field changes, which has implications for K3(Sucita & Broto, 2011). Additionally, there is a lack of documentation and training for workers to prevent work accidents, resulting in inconsistencies in meeting requirements and other references (Ramli, 2010).

Based on these findings, the next course of action should involve implementing response measures and improvements. This includes developing special procedures and formats for field changes to make informed decisions regarding OHS, documenting procedures using a new information system, and providing refresher training for workers. It is crucial for workers to be trained in simulating emergency situations to prevent work accidents and ensure compliance with the Occupational Safety and Health Management System (SMK3) as per the relevant laws and regulations (Prasetyo & Oetomo, 2023).

4. CONCLUSION

After conducting an analysis and audit on the construction project of Probolinggo Banyuwangi Toll Road Package 1 sta-3+881 sta 09+000, it has been determined that the implementation of the Occupational Safety and Health Management System (SMK3) is at a satisfactory level. The achievement rate is 89.76%, indicating that the implementation is appropriate. However, there are still 10.24% of findings that fall under the non-conforming category, specifically in the Minor Category.

Several factors have been identified as contributing to the non-fulfillment of implementation. These include the absence of procedural documents and specialized formats for on-site changes that impact Occupational Health and Safety (OHS). It is worth noting that insufficient documentation and training for workers have resulted in inconsistencies in meeting requirements and other references.

To address these challenges, it is recommended to create special procedures and formats that are related to changes affecting OHS. Additionally, documenting procedures through a new information system and implementing refresher training for workers are crucial steps in accident prevention and aligning with SMK3 application as per government regulations. To meet requirements and address inconsistencies, it's recommended to review and update existing SMK3 documents and procedures. To ensure that SMK3 is implemented effectively throughout the organization, it's important to conduct regular internal audits. In addition to assessing the implementation of SMK3 through audits in construction projects, future researchers should also explore worker satisfaction and productivity levels after SMK3 implementation.

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