

# Overview of The Application of Hot Work Permit At PT Wijaya Karya Gedung Tbk. Construction Project of Halim High Speed Rail Station

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Accepted (23 Desember 2023), Revised (17 Oktober 2023)

**Abstract.** A safe work permit system is usually a written legal document, so it has various benefits to protect the safety of workers that carrying out work from possible dangers in their work or due to surrounding conditions. Apart from that, the work permit system also protects companies from potential losses due to undesirable events resulting from work carried out illegally. Implementing a work permit system will increase responsibility and accountability in carrying out duties. The aim of this research is to understand the application of hot work permit at PT Wijaya Karya Gedung Tbk. Construction Project of Halim High Speed Rail Station. This research uses qualitative data methods obtained from observations, interviews, documents, reference books and company data. A work permit is applied before carrying out work in accordance with No. Doc: WIKA-BG-PDSMM-PM-16. Permit to work (PTW) application flow carried out by the Sub-Contractor or foreman has 6 stages in the application for PT Wijaya Karya Gedung Tbk. Construction Project of Halim High Speed Rail Station. one of the hot work permit for Welding Fire Fighting Installation work in the 2nd Floor area of AS 5-19/AF which has attached a construction permit to support the Hot Permit. Such as: Work Methods, JSA, PPE, Protective Equipment.

**Keywords:** Work Permit System, Hot Work Permit, Work Permit Application

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## INTRODUCTION

Cases of work accidents in the form of fires and explosions in companies are still relatively high, so they can result in losses of both working hours and company assets which can result in the company stopping production. [1] . This case really requires special attention and prevention of the danger of fire. In accordance with NFPA 51B of 2009 [3] which states that the main potential hazards in hot work are fire and explosion.

Efforts to prevent the potential dangers of hot work include using a hot work permit. A hot work permit is a work permit for work that produces fire or uses fire, where the work location is close to flammable materials [6].

PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station has many potential dangers, one of them is the danger of hot work. However, PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station has made precautions to prevent potential heat hazards by implementing a hot work permit system to control fire hazards in Project.

## **FUNDAMENTAL THEORY**

According to Government Regulation no. 50 of 2012 [6]. Whereas the occupational health safety management system requires a system that regulates the risk of occupational hazards to avoid work accidents in element 6 of the OHS Management System, it is stated that companies must apply work permits for work that has a high potential for danger, one of which is the potential for hot work hazards.

A secure Work Permit System is usually a written document that is legal in nature, so it has various benefits such as; as to protect the safety of workers carrying out work from possible dangers that exist in their work or due to surrounding conditions [7] . The work permit system also protects companies from potential losses due to undesirable events resulting from work carried out illegally. Implementing a work permit system will increase responsibility and accountability [3] .

Types of work permits According to the Health and Safety Executive [3] are divided into Hot Work Permit, Cold Work Permit / General Permit, Confined Spaces Entry Certificate. According to the International Association of Oil & Gas Producers the work permit form contains a description of the job ( name of job , location of job , work equipment used , job hazards , prevention of hazards that will be carried out, PPE that must be used during work , signature of the person responsible for the work. the work , Signature of the person issuing the permit , Signature when a change of work shift occurs , Statement of the person responsible for the work whether the work has been completed or not completed and the location has been left in a safe condition , Signature of the person who issued the permit confirming that the location has been inspected and the equipment has been returned or the isolation is in a safe condition or the permit/permit has been cancelled.

The validity period of the work permit is 8 working hours and is valid for less than 1 day. Or adjusted to the working hours applicable to the company [2]. Monitoring, Auditing and Reviewing work permits are very necessary to control that the area around the workplace is safe. Monitoring results must be stored for audit purposes . Monitoring safe work limited work detector measures . safe release of work permit Work meeting Registration Finish start is usually in the form of a checklist [2]. Termination of Permit To Work carried out If there is an alarm about an accident at the work site then the work is stopped temporarily, Safe Work Permit for hot work by carrying out a gas test in a closed space location with equipment such as a gas tester , if the gas tester equipment is damaged then the equipment must be repaired and the gas tester checking work was temporarily stopped , there was a change in the scope of work. At locations with conflicts in other scopes of work, the work permit was temporarily stopped, because there was still isolation work that did not use a safe work permit [9].

## **METHODOLOGY**

### **Collection Data**

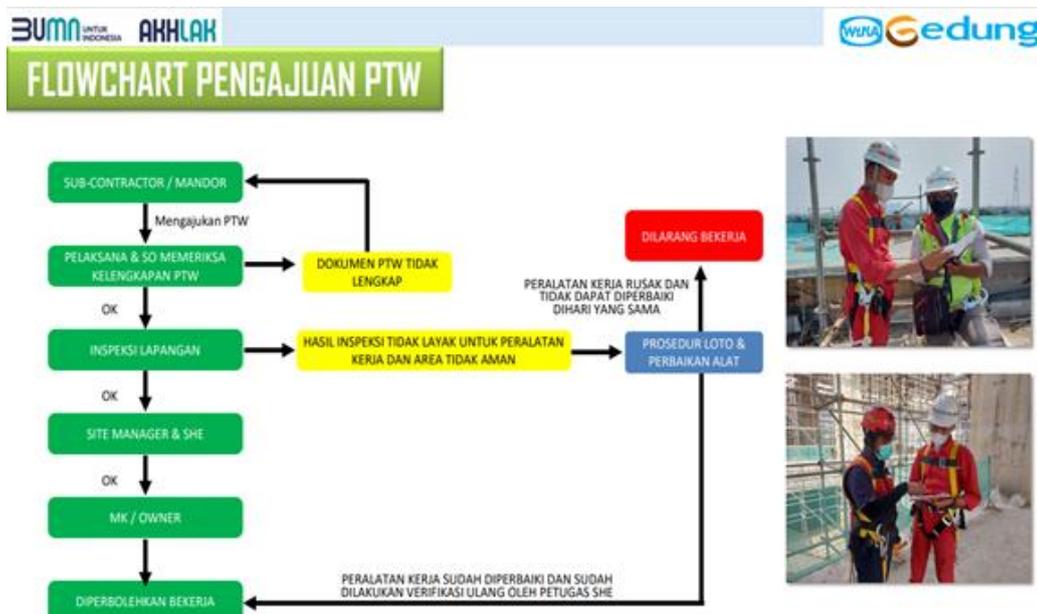
This research was conducted using qualitative methods [8]. The data obtained from this observation is useful for recording the results of observations whether the process of applying a hot work permit is in accordance with the procedures set by the company, starting

from the preparation, implementation and post-work stages. Interview researchers ask questions. The application of the hot work permit is carried out by the company, especially HSE and other other related matters., Documentation in this research was obtained through company records in the form of company policy documents, related regulations, work procedures/work instructions, and other documents related to the implementation of hot work permits at PT Wijaya Karya Gedung Gedung, Tbk. Halim High Speed Train Station construction project.

**Processing Data**

Data processing was carried out by comparing the implementation of the Description of the Application of Work Permits at PT Wijaya Karya Gedung Gedung, Tbk. Halim High Speed Train Station construction project with procedures for the application of work permits at PT Wijaya Karya Gedung Gedung, Tbk. The Halim High Speed Train Station construction project describes the data in the form of regular and effective sentences, making it easier to understand.

**RESULTS AND DISCUSSION**



**Figure 1** Permit Submission Flowchart

(Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

PTW application flow carried out by the Sub-Contractor or foreman has 6 stages in the application for PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station include:

1. Sub-Contractor or foreman fills out the work permit form. After filling it in, the Sub-Contractor applies for a work permit to the building's SO Wika by attaching the work method and JSA.

- The executor checks the work permit and the SO checks the completeness of the work permit. If the work permit is incomplete, the work permit is returned to be completed.

For hot work, the PPE that must be checked and used are:



**Figure 2** Special Personal Protective Equipment

(Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

- If the SO documents are complete, the SO inspects the work area, but if the results of the inspection are not suitable for the work equipment and the work area is unsafe, the work equipment must be repaired and the equipment must be inspected by the equipment team and SO Wika Gedung and if the area is unsafe then it will be carried out. lotto procedures.



**Figure 3** Tool Inspection Tagging/Sticker

(Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

- Site Manager and SHE check work permits and validate work permits
- MK or Owner checks and validates work permits
- Work can be carried out when all stages have been carried out and the equipment has been inspected.

Hot work permit procedures implemented by PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station, researchers will explain one example Hot work permit for welding Fire Fighting Installation work in the 2nd Floor area AS 5-19/AF which was carried out on 25 – February – 2023. The stages in the Welding Fire Fighting Installation work work in the 2nd Floor area AS 5-19/AF are as follows:

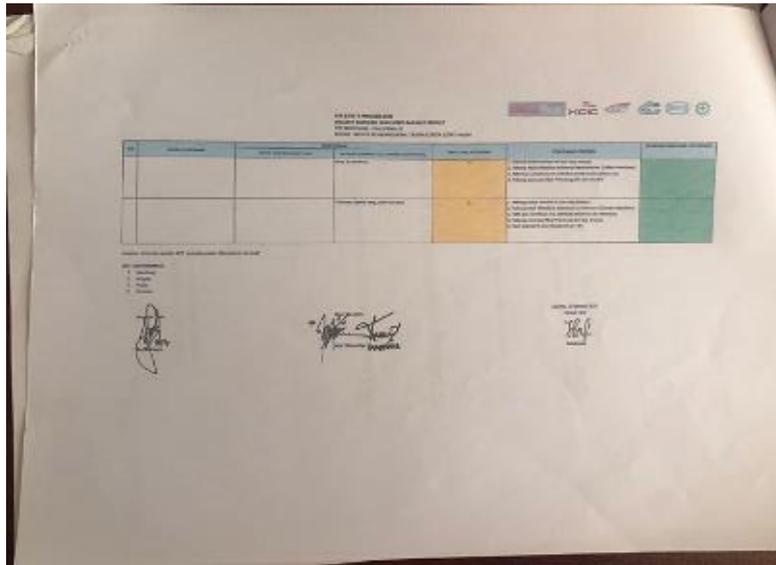
1. The Sub-Contractor or foreman makes work methods according to the work to be carried out and has been approved by SHE, Production, Project Manager and by PT Wijaya Karya (Persero) Tbk – High Speed Railway Contractor Consortium (HSRCC).



**Figure 4** Fire Fighting Installation Work Method (Halim Station)

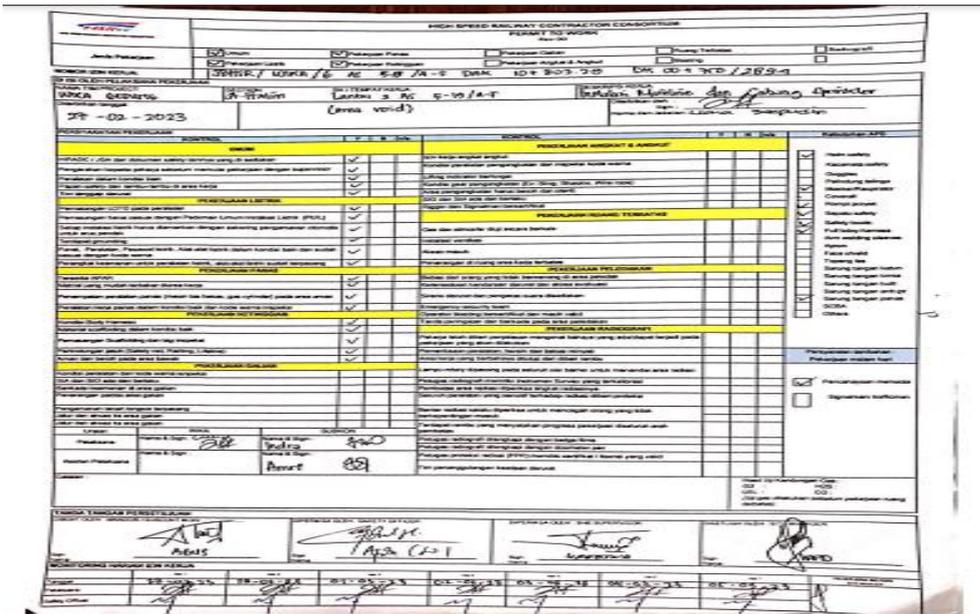
(Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

2. After the work method has been approved, SO- Subcont then makes a JSA according to the work to be done and submits it to SHE, Project and Production Manager.
3. After the JSA has been approved by SHE, the SO- Subcon Project and Production Manager makes a Hot Work Permit and completes the PPE appropriate to the Hot Work as contained in the From Work Permit.
4. After the Sub-Contractor or foreman fills in the work permit according to the type of work, it is submitted to the SO to check the completeness of the PPE and the contents of the form, once it has been approved it is then submitted to the implementer for location registration work area.
5. After the work permit has been approved by SHE, Production. SO Check the work area to ensure that protective equipment (Portable Fire Extinguisher, Fire Blangket and work area in Barricade) is available around the work area.



**Figure 5** JSA Fire Fighting Installation Work (Halim Station)  
 (Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

6. SO Wika Gedung Approves/Signs the PTW and can carry out hot work.



**Figure 6** PTW Fire Fighting Installation Work  
 (Source: SHE- PT Wijaya Karya Gedung Tbk. Construction Project Of Halim High Speed Rail Station)

The procedure for making a Hot Work Permit at PT Wijaya Karya Gedung Tbk is in accordance with No. Doc.: WIKA-BG-PDSMM-PM-16 which refers to government regulation No. 50 of 2012 concerning the implementation of OHS Management System [4]. The procedure is saved on Google Drive then the link is shared via Whatsapp Group SO Subcont/Mandor. There is also a flowchart in the procedure, but there is no written

explanation so that workers do not understand this procedure. This results in workers still making mistakes when applying for permits. Because socialization about this procedure is carried out only once to the subcont when they first join.

According to the author's observations, the implementation of hot work permits at PT Wijaya Karya Gedung Gedung Tbk. The Halim Fast Train Project regarding JSA and hot work permits is based on regulations according to government regulation No. 50 of 2012 [4]. Concerning the Implementation of OHS Managemnet System Appendix II part 6, where in implementing JSA and hot work permits, PPE, First Aid, portable fire extinguisher, signs are provided. OHS signs and establish a strict prohibition against unsafe acts and unsafe conditions. This is the result of hazard identification and risk assessment which is then followed up with control measures in the form of administrative requirements, PPE obligations, provision of facilities and infrastructure that support OHS, monitoring and housekeeping inspection. However, the author still sees that several work areas have not been barricaded and cleaned.

## **CONCLUSION**

From the results of the analysis the researchers concluded:

1. Making Hot Work Permits at PT Wijaya Karya Gedung Tbk. Construction Project of Halim High Speed Rail Station No. Doc: WIKA-BG-PDSMM-PM-16 already has documentation, and the procedure is distributed on Google Drive which is shared on the Whatspap Group SO Subcont / Foreman in writing and verbally based on routine activities that are often carried out according to existing conditions in the field. However, there are still some subconts who do not understand the work permit application flowchart, so errors are still found when submitting.
2. In implementing the hot work permit at PT Wijaya Karya Gedung Tbk, the construction of the KCIC Halim Station researchers will explain one example Hot work permit for welding Fire Fighting Extinguisher work in the 2nd Floor area AS 5-19/AF which was carried out on 25 – February – 2023. Where the foreman makes a JSA work method, a hot work permit for welding work on Fire Extinguisher Installations and submits it to the SO. After the work permit is approved the SO checks the work area to ensure the availability of personal protective equipment (APAR, Fire Blangket and work area in Bariccade) around the area. Work. If SO Wika Gedung Approves/Signs the PTW then hot work can be carried out.

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