Permit to Work Systems

Introduction

Permit to work systems are used where the potential hazards are significant and a formal documented system is required to control the work and minimise the risk of personal injury or loss/damage, e.g. a major fire. The aim is to remove both unsafe conditions and human error by imposing a formal system detailing exactly what work is to be done and when and how to undertake the job safely.

Operation of the Permit to Work System

Examples of work in which a permit to work system should be used include the following activities:

- Entry into confined spaces
- Work involving the splitting or breaking into of pressurised pipelines
- Work on high voltage electrical systems above 3,000 volts
- Hot work, e.g. welding, brazing, soldering, etc.
- Work in isolated situations or where access is difficult
- Work at height
- Work near to, or requiring the use of highly flammable/explosive/toxic substances
- Fumigation operations using gases
- High-risk operations involving contractors, such as excavation works, or demolition works

Designing the Permit to Work System

Permit to work systems are based on robust formal safe systems of work which have effective controls in place to prevent danger, as well as good standards of organisation to ensure compliance.

Permits should ensure that control measures are available for both 'routine' and 'one-off' situations. Examples include fire extinguishers being available for hot work, or harnesses and resuscitation equipment available when entering confined spaces.

In designing and implementing permit to work systems, the following should be considered:

The potential hazard

- What is the potential for a worst-case scenario?
- What are the possible outcomes, e.g. major fire due to hot work, fatality from fall through a fragile roof surface?

Control measures needed

- At what stages are formal decisions to be made, e.g. at the beginning of the work, before entry into the vessel, before the contractor is allowed in?
- Who is authorised/responsible for the job being undertaken safely?
- Physical controls required, e.g. safety harnesses and lanyards for fall prevention, barriers to separate work areas?
- Human factors – training, competency to undertake the work safely?

Permit to work checklist

- Has a suitable checklist of precautions been produced as part of the permit authorisation process?
- Does it include all relevant control measures, e.g. Personal Protective Equipment (PPE) required, fire precautions, housekeeping measures?
- Isolation and lock-off procedures for all power sources?

Issuing, managing/amending and cancellation of permits

- Who is competent to manage permit to work jobs?
- What level of expertise is required?
- Does the permit form contain 4 signature boxes?
    1. Issue of permit – signed by permit issuer
    2. Confirmation of receipt of permit and the control measures required – signed by the permit receiver (the person who is in charge of undertaking the work)
    3. Confirmation of satisfactory completion of the work – signed by both permit issuer and permit receiver
    4. Cancellation of the permit – confirming the work is now complete and normal operations can be resumed – signed by the permit issuer
- The permit does not extend beyond a single shift?
- Any amendments required are documented on the permit?

Permit to work procedure

- Is there a permit to work procedure in place?
- Does it cover all tasks that are considered a high-risk?
- Are authorised competent persons listed?
- Document control and regular reviews in place?
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Training and communication arrangements

- How are authorised persons trained?
- How is competence measured?
- How are employees trained?
- How are contractors informed and monitored?

Audits of the permit to work system

- Is the permit to work system regularly audited to ensure compliance with procedures?

Permit to work systems should be designed so that they remain within the control of the organisation and should not be passed to contractors to control. The permit system will only guarantee safety if the safe system of work is adequate and is followed by all involved. In other words, deviation from the work specified on the permit must never occur due to the significant risks involved.

Summary

Permit to work forms should incorporate the following features:

- The permit must specify who is to do the work, the time for which it is valid, the work to be done and the necessary precautions
- During the permit, no person shall work on any equipment not covered by the permit
- No person shall carry out work which is not authorised by the permit. If there is to be a change in the work, the permit must be amended/cancelled. This can only be done by the authorised originator of the permit
- There must be liaison with other work areas whose activities could be affected by the permit system
- Where the permit to work is to be carried out on part of a site or on specific equipment, the limits of the work must be clearly marked
- Permits must consider all contractors on site, who should be briefed prior to the commencement of work

Checklist

A generic Permit to Work Systems Checklist is presented in Appendix 1 which can be tailored to your own organisation.

Additional Information

- Aviva Hot Work Operations Loss Prevention Standard
- Guidance on Permit-to-Work Systems: HSG250 – Health and Safety Executive
- Permit to Work Systems – Health and Safety Executive
- Confined Spaces – A Brief Guide to Working Safely: INDG258 – Health and Safety Executive
- The Safe Isolation of Plant and Equipment: HSG253 – Health and Safety Executive
- Safety in Gas Welding, Cutting and Similar Processes: INDG297 – Health and Safety Executive
- Hot Work on Small Tanks and Drums: INDG314 – Health and Safety Executive

Further risk management information can be obtained from Aviva Risk Management Solutions

Appendix 1 – Permit to Work Systems Checklist

Location	
Date	
Completed by (name and signature)	

	Permit to Work Systems	Y/N	Comments
1.	Is there a formal permit to work (PTW) procedure in place for all high-risk activities, stating the obligations of each party, and includes health and safety standards and property protection precautions?		
2.	If hot work is to be completed, is the limit of public liability insurance adequate for the area they are working on and the possible exposure? Are there any restrictions in their insurance policy on completing hot works?		
3.	Have reasonable checks been completed to ensure that the persons undertaking the work, including contractor employees are competent?		
4.	Has the task(s) to be undertaken been clearly defined on the PTW form?		
5.	For all contractor permit to work tasks, have copies of relevant risk assessments and method statements been requested and received from the contractor and are readily available to the permit issuer?		
6.	Are control measures clearly defined on the PTW forms?		
7.	Is suitable PPE available, provided and worn correctly by all employees and/or contractors undertaking tasks that require a PTW?		
8.	Where testing is required, e.g. for working in confined spaces, has this been carried out and recorded?		
9.	Are emergency procedures in place, e.g. confined spaces/work at height rescue plan?		
10.	Are isolation and lock-off procedures being followed where appropriate?		
11.	Regular supervision and monitoring is undertaken during the period the PTW is open?		
12.	Are all PTW signed in all the 4 boxes by the authorised persons?		

	Permit to Work Systems Contd.	Y/N	Comments
13.	The permit is not allowed to extend beyond a maximum of a single shift (maximum of 12 hours)?		
14.	Are the standards recommended in the *Aviva Loss Prevention Standard: Hot Work Operations* followed?		
15.	Have all combustible materials been moved away from the working area (minimum of 10m)?		
16.	Has consideration been given to potential fire spread/combustible construction features/explosive atmospheres in the hot working area?		
17.	Is there a continuous fire watch during the work; and an additional 60-minutes continuous monitoring immediately after completion of the work?		
18.	Is there a further 180-minutes of intermittent fire watch checks undertaken where necessary (refer to risk assessment)?		
19.	Appropriate fire extinguishers are provided?		
20.	Is the PTW only issued for one shift?		
21.	Are all items of equipment, hot waste materials, stub ends of welding rods removed and either stored securely or disposed of correctly?		
22.	Are all incidents, near misses, injuries sustained, or damage caused reported and investigated thoroughly?		
23.	Additional Comments:		