

## **Guidance on Work Permits.**

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#### 1. Introduction

Within all industries (including printing inks manufacturing) there are some activities which are outside of the core business of the company (such as maintenance activities) and that are sometimes disregarded, even if the risks posed by them to personnel and assets may not be negligible. This document covers the use of Work Permits, in order to allow EuPIA members to improve their Safety performance. In many countries such a system is required by law, or a Risk Assessment within the prescribed Safety Management System. Even if such a system may be seen as bureaucratic and a further paperwork task, in reality it will help in order to reduce accident figures and to better control activities, in order to avoid liability for unwanted events or damages.

The Responsible Care program is also supporting the implementation of such a system for better risk management and control.

### 2. Scope

This Guidance document is intended to provide information on how to implement a Work Permit system which will allow users to perform activities assigned to external contractors or to internal maintenance service teams in a safe and structured way. Failure to effectively manage work permits can lead to accidents and injuries. Some examples of Work Permits are given in the annexes to this document, however it is recommended to adapt the given examples to the real situation present within the company, as organizations and structures may differ from company to company.

## 3. Field of application

Work permit systems can be simple or complex, according to dimensions of the company and tasks covered/performed. Typically, such a system will cover planned and extraordinary maintenance activities as well as activities extra to the ordinary routine, that deserve a higher level of attention, such as hot works, electrical works and confined spaces. Other works typically covered by Work Permits are working at height or underground level as well as the use of particular tools which require specific training and / or specific precautions.

## 4. Description

A Work Permit system needs, for its implementation, a written document (often a procedure), which describes the process, the different working permit types and a register of permits emitted, normally following in chronological order.

Particular attention must be paid to the compilation of the Work Permit, which may require at least basic training, and, even more relevant, to the person(s) allowed to sign or release a Work Permit within the company. Best practice in this area is to have the list of responsible people on display, including examples of their signatures, in order to avoid shortcuts.

If implemented in the correct way, the system should not take too much time for it to function and for registration and is something easily done also from an IT point of view. It doesn't need to be overengineered, as, in smaller organisations an Excel file can be sufficient to have it under control. It must be said that on the market there are also relatively inexpensive software or packages available.

One suggestion is to use specific colours for each Work Permit type, as this may help recognize them quickly by all the involved personnel and by the remaining employees.

Within the procedure it is recommended to specify:

- a) Duration of the Work Permit (in ordinary situations, not over one working day)
- b) Obligation to display the Work Permit in the affected working area
- c) Delimitation/identification of the involved area (e.g., with red and white plastic stripes)
- d) Prohibition for other employees to stop and observe works (no bystanders)
- e) Obligations & recommendation for wearing specific PPE and or use of specific instruments aimed to reduce/manage specific risks (e.g.: explosive meters for ATEX areas, oxygen level meters for confined spaces, etc.)
- f) The need for an emergency team to be placed on early warning who are able to react in a very short time in case of emergency as per a fire or spillage of dangerous liquids, gas or need to rescue from confined space situations etc.

It has to be noted that a Work Permit system is not a substitute for a Change Management system, as they are two different topics.

All the provisions for specific Work Permits listed hereunder will apply to internal personnel as well as to third parties (contractors).

### 4.1. Work Permit (simplified, for small entities)

This kind of Work Permit is a general purpose one, specific to small companies. It is a simplified approach to the topic, mainly helping the company to highlight some activities that may require a higher level of attention by the company and the employees. It is not suitable for covering high risk activities, such as working in confined spaces or similar ones.

For such activities it is strongly recommended either to implement specific Work Permits or to hire specialized safety consultants.

The management of this Work Permit is straightforward particular attention must be paid is assigning the completion and authorisation of it, as at least a basic training and comprehension of the Work Permit System and how it functions is required. If activities covered by the Work Permit are performed by contractors, it is highly recommended not only to verify their understanding of the Work Permit system, but also their competence and safety performance.

#### 4.2. Work Permit (hot work)

Welding, grinding and similar activities are covered by the 'hot works' definition. Typically, they are conducted by maintenance engineers, under supervision. As many of the materials present within production departments of a printing ink factory are combustible, and in many cases flammable or highly flammable solvents are present as well, all the necessary precautions need to be taken in order to avoid ignition of other materials or even fires.

#### 4.3. Work Permit (electrical work)

Work on electrical parts or electrical equipment is the field of application for this kind of permit. Electricity presents specific risks (electrocution, etc.) as well as the possibility in some cases of sparks generation, so this is an important Work Permit as well. Electrical work must be performed by specialized engineers, as the risk of incurring accidents is high if activities are performed by untrained people. Sometimes, with the wrong idea to spare time, ordinary employees may try to make some "easy" electrical repairs to the machines, but also considering the possibility that there may be residual energy within the equipment, it is strongly recommended not to allow such behaviours.

### 4.4. Work Permit (confined spaces)

Confined spaces are one of the most dangerous topics within industrial activities. They may also be not immediately obvious, as trenches, underground working environments and other areas can, under specific circumstances, be considered as confined spaces. Confined spaces are also one of the more lethal dangers in safety at work, as many times they have led to multiple fatalities.

For this area a specific Work Permit is required, and the responsibility for issuing them must be at the higher level (by the appropriate level of management). Containers, vessels and closed structures are the most obvious examples of confined spaces; it is recommended to supplement/integrate the Work permit form with a list of the identified confined spaces, if feasible/reasonable.

### 4.5. Work Permit (working at height)

Working at a level higher than ground level also presents risks, in particular of falling people and objects. It is for this reason that the building industry has one of the highest rates of lethal accidents, as people over the time tend to become confident about the risk associated with this kind of work. It is also common to underestimate such a risk, as often can be present at home as well.

For this kind of permit it is important to define what needs to be considered as working at height; in some countries it is defined by law, but, as a rule of thumb, all works over 1,50 metres can be considered as working at height. It is also recommended to consider trenches, foundation works and in general all excavation under this topic, as the effects of falling into such works can be equivalent to falling from a high place.

Working on (step)ladders, platforms and other similar situations requires, if it is a standard situation, a specific Risk Assessment.

### 4.6. Work Permit (general)

In many situations, in real life, it can be envisaged the necessity of a "general" Work Permit for covering all situations which can be considered as having a risk but aren't covered by the above types. Examples of such situations can be if there is a need to do some work on a FLT lane or if a lone worker has to be assigned to a task far from colleagues or other non-routine tasks.

### 5. Conclusions

A structured Work Permit system will improve the health, safety and environmental performance of EuPIA members by implementing a safer working environment for their employees at all levels. Such a system is recommended by almost all Safety Management Systems, and, where this is already in place, has significantly contributed to reduce accidents and lost time injuries.

As a conclusion, the implementation of such a system is strongly recommended.

EuPIA OSRA Working Group, May 2024

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## **APPENDIX 1 - Examples of Work Permits.**

a) Work Permit Example - General Purpose.

#### General Work Permit for hazardous activities

ork in height	Digging	Electric work		Piping mounting / dismantling	Other (please insert specifi risks)
Yes No Done rtable ladder	Pipes	Classified area presence Equipment Connected To power Explosive Atmosphere Tested Cables interrupted Fuses taken out		Yes No Done Substances         Involved       Weight known         Cleaning         needed     Blind flange       Leaking       protection   needed	
General considerations	3				
	Ye	s No			
Firefighting equipment ne	eded				
Area segregation					
Further measures					
PPE other than ordinary	ones				
Further (specific) Working (e.g. confined spaces)	g permits				
Remarks					
Signature of the operator			Signatu	re of supervisor	
Signature for authorizatio	n –		Signatu	ure of HSE (if required)	
Signature for end of work					
Area has been given	back to the departme	nt clean and in g	ood con	ditions	
Signature end of work			Signatu	re of department	

#### List of actions to be carried out prior/during Work Permit validity

Work in height Digging	Electric work		Piping mounting / dismantling	Other (please insert specific risks)
Pipes	O Done Classified area	Yes No Done	Product contained	
Yes No Done presence		res No Done	Nature	
Stie secureties Diameter	Explosive		PPE	
In place Depth Substance	Atmosphere Tested *1	0 0 0	Yes No Done	
Second man	Power switched Off		Cleaning □ □ □	
Portable ladder (double) Electric	Fuses taken off	0 0 0	Start)	
Yes No Done Other ones_ Power disconnected	(preferably in		Waste collected   □ □ □	
Good conditions	□ Verification Powe		Container	
5 m Needed	Switched off prior		Blind flange	
Anti-opening	To "Out of Service	e"	Billio lialige	
device present Depth > 1,5 m	Further		In place □ □ □	
	Precautions		Marking 🗆 🗆 🗆	
Scaffold				
Yes No Done			Leaking protection	
Protection on open   □  □  □			Sufficient	
sides			Absorbing   □ □ □	
Handrail present			Material	
Ground fixing				
(if fixed – otherwise wheel fixing)				
ILME (A)			1	

With thanks to the International Association of Oil and Gas Producers (IOGP) for giving us permission to reproduce their documentation.

<sup>\*1 =</sup> Device available at\_\_\_\_\_

### b) Work Permit Example - Hot Work.



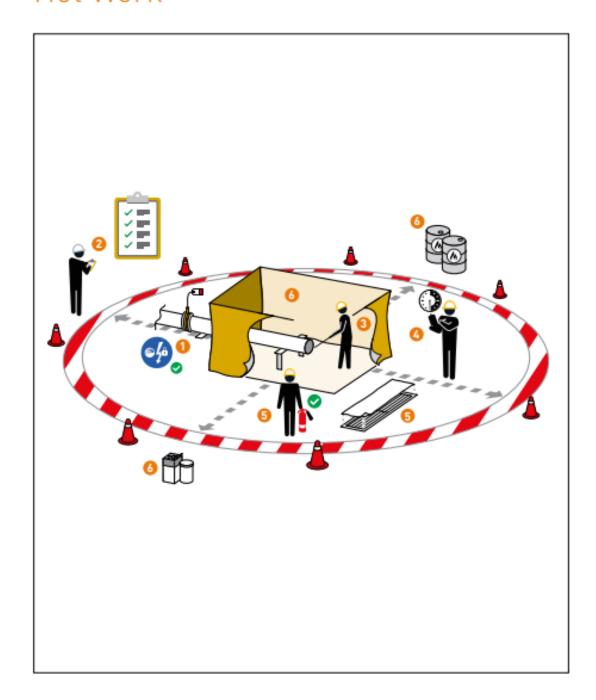
Start-Work Check

# Hot Work

safegu	Confirm each control/ Guidance for confirming each control/safeguard safeguard starting work		each control/safeguard		Person(s) Performing Work	Start-Worl Verifier
ENER	BY ISOLATION					
I HAVE	CONFIRMED:					
0	The Hot Work has been evaluated for energy isolation requirements.  Does Hot Work require energy isolation?  Yes: No:   If yes: complete Energy Isolation Start-Work Check  If no: continue to Step 2					
PRIOR	TO HOT WORK ACTIV					
I HAVE	CONFIRMED:					
2	The hazards have be identified, controlled and it is safe to start	<ul> <li>Discuss hazards with the work to:</li> <li>Check for simultaneous operation</li> </ul>	specific to the scope of work on prior to the start of work is that may introduce any additional hazards			
3	Is the Hot Work in a hazardous area? Yes: No: If Yes: Confirm the initial gas test has be completed If No: Move to Step 5	-At all openings below and above the hor work area -At a minimum distance around the hot work around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a minimum distance around the hot work area -At a m				
4	The Hot Work atmosphere will be continually monitore	Note: "Continually" monitored mean	nented (e.g., in the permit) before starting work is periodic mentioring of the atmosphere with a defined he duration of work activities.	frequency or		
5	Ignition sources are identified and controlled  - Barriers are in place to prevent ignition in the hot work area - Drains, gaps, openings in tanks or piping have been covered/scaled - Verits are sociated/socied away from the area - A barrier Free Match has been designated and is all the work location - Firefighting equipment is inspected, on site, and fully knotional					
6	Flammable/combustible  materials have been removed or, if not removed, measures (e.g., fire blankets) are  in plans  to shield them from ignition sources					
	(		guards are in place and verified prior od seek help if anything changes.	to starting wo	rk.	
		ed Name & Role				



# Hot Work



### c) Work Permit Example – Electrical Systems.



Start-Work Check

# Energized/Live Electrical Systems

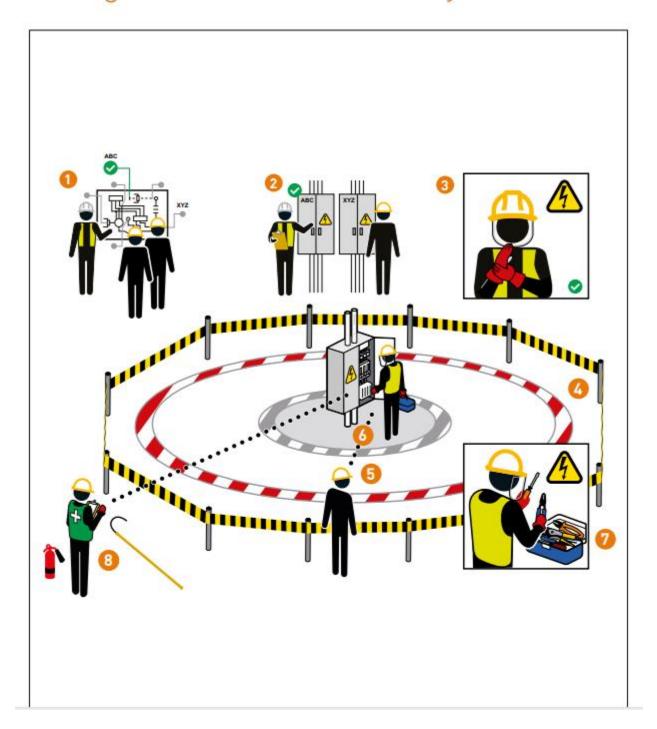
### WHEN TO COMPLETE - Before the start of any ENERGIZED/LIVE ELECTRICAL SYSTEMS activities

safegu	m each control uard below befo ng work		Guidance for confirming each	n control/safeguard		Person(s) Performing Work	Start-Work Verifier
I HAVE	CONFIRMED:						
1	The authorized has been review agreed to	zed work scope  * Review work scope per the approved work permit  * Discuss stop work considerations if work situation changes					
2	Circuit/equipme be worked on is identified in the	the one	Equipment to be worked on is correct using	ng tag numbers or cable markings			
3	Personnel are wearing PPE rated for:  The electrical hazard  The electrical voltage prior to entering any access restricted area  PERSONNEL AND						
4	Restricted acce have been iden barricaded						
5	An electrical standby person is in place during work activities.  If an electrical standby is not required, continue to the next step.						
6	Communication plan with the electrical standby person has been agreed to - Stop work signals - How to initiate emergency response plan  * A communication plan has been agreed to and tested with the work crew - Stop work signals - How to initiate emergency response plan						
7	The insulated tools and testing equipment are:						
8	An emergency response plan is in place and is ready to be used  * All emergency equipment required by the plan are at the worksite (e.g., electrical safety hooks, insulated gloves, extinguisher for electrical fire etc)  * Methods of communication have been discussed with the electrical standby person and rescue team  * Rescue equipment is at the job site  * The rescue team:  - is available  - is aware of specific hazards related to this task  - can execute the rescue plan						
		Conf		ds are in place and verified prior to sta eek help if anything changes.	arting wor	·k.	
		Printed Nar	ne & Role	Signature	Date		
Start-W	Vork Verifier						

	Printed Name & Role	Signature	Date
Start-Work Verifier			



# Energized/Live Electrical Systems



d) Work Permit Example - Confined Spaces.



Start-Work Check

# Confined Space Entry

WHEN TO COMPLETE – Before the start of any CONFINED SPACE ENTRY activities					
Confirm each control/ safeguard below before starting work		Guidance for confirming each control/safeguard	Person(s) Performing Work	Start-Work Verifier	
ENER	GY ISOLATION				
I HAVI	E CONFIRMED:				
1	The confined space has been evaluated for energy isolation requirements. Does Confined Space Entry work require energy isolation? Yes: No: Yes: No: Yes: Solation Start-Work Check If no: continue to Step 2	All potential energy sources have been identified, isolated, and locked and tagged per isolation plan.     The system has been drained, flushed, or purged to remove explosive materials or gases.			
PRIOR	TO CONFINED SPACE ENT	RY			
I HAVI	E CONFIRMED:				
2	The hazards have been identified, controlled, and it is safe to start	Complete a task risk assessment specific to the scope of work Discuss hazards with the work team prior to the start of work Check for simultaneous operations that may introduce an additional hazards			
3	Gas testing frequency has been established	Gas testing is being done by a Qualified Gas Tester Initial gas testing and the required follow-up testing are completed before starting work Check testing results and agree on a schedule for follow-up testing before starting work			
4	Ventilation is in place and working	Confined space is continuously ventilated If using mechanical ventilation: The flexible ducting is arranged so there is continous air flow in the entire space Equipment is bonded and grounded to prevent static electricity hazards Ventilation inlets:  - are not near an ignition source - will not be affected by wind/weather conditions and will not have flow restrictions - will not draw contaminated air (e.g., vehicle or generator exhaust) into the space			

5	An attendant is in place and the method of communication is agreed to and tested prior to entry	Dedicated attendant is present at the designated entry point(s) to the confined space The attendant describes their responsibilities, which include:  Using previously agreed upon communication methods (e.g., hand signals, radio)  Monitoring personnel in the confined space  Documenting entry and exits from the confined space  Monitoring the confined space for changing conditions  Initiating the emergency rescue response if needed	
6	My breathing apparatus is in good working condition. If no breathing apparatus is required: Continue to the next step.	The breathing apparatus is complete, certified, and in good working condition The main air supply is certified breathing air and is properly connected Escape pack is in place and functioning prior to entry	
7	The rescue plan is in place and ready to be used	Discuss methods of communication with attendant and rescue team prior to entry Rescue equipment is at the job site The entrant is wearing rescue equipment per plan (e.g., harnesses, retrieval device) The rescue reew: Is available Is aware of specific hazards related to this task - can execute the rescue plan	

## Confirm these controls/safeguards are in place and verified prior to starting work. Stop and seek help if anything changes.

	Printed Name & Role	Signature	Date
Start-Work Verifier			



# Confined Space Entry



### e) Work Permit Example - Working at Height.



Start-Work Check

# Working at Height

#### WHEN TO COMPLETE - Before the start of any WORKING AT HEIGHT activities

Confirm each control/ safeguard below before starting work		Guidance for confirming each control/safeguard	Person(s) Performing Work	Start-Work Verifier	
I HAVE	I HAVE CONFIRMED:				
1	The hazards are identified, controlled, and it is safe to start	Complete a task risk assessment specific to the scope of work Discuss hazards with the work team prior to the start of work Check for simultaneous operations that may introduce additional hazards			
2	My fall protection equipment is: • certified • inspected • rated • fit for the task	Fall protection equipment includes fall arrest and/or fall restraint systems Full body harness is load rated to support the weight of the worker Check every strap, buckle, fitting, and/or grommet for signs of wear on fall protection harness Fall arrest system contains a self-retracting lifeline or shock absorbing lanyard Fall restraint contains a fixed lifeline configured to prevent the worker from reaching the edge and falling Fall arrest is shorter than the potential fall distance  Note: Stop and notify supervisor if the fall protection equipment has excessive wear/damage/mechanical malfunction or is not fit for the task			
3	The fall protection harness is adjusted to fit	Only full body harnesses are used Harness straps are not twisted Harness body straps are adjusted for close body fit (i.e., no slack) Note: Use of body belts is not allowed			
4	The approved anchor point(s) are in place for 100% tie off	100% tie off can occur outside of protected areas (such as an elevated work area not enclosed by hand ralls) 1 The anchor point meets regulatory/company requirements 2 The position(s) of anchor points allow for 100% tie off 3 The number of anchor points awailable allow for 100% tie off 4 Pull on the connecting device to test if attachment is secure  Note: Confirm anyone working at height is 100% tied off at all times (e.g., at least one hook must be anchored at all times)			

5	If a fall occurs, the fall path is clear	Fall protection is fit for purpose to protect the worker if they fall Fall arrest distance is shorter than fall distance to first obstruction If the worker is likely to swing, check that the path is free of obstructions Mobile obstructions have been removed from fall path	
6	The tools/materials being used at height are secured	Tools used at heights have securing wire/lanyards/tethers  Materials used at height are secured in storage boxes, pouches, bags, etc.  Cover openings to lower levels (e.g., grating, gaps, etc.) or use debris nets  Note: Follow the site/company dropped object prevention program (e.g., work at height tool register)	
7	Barriers and drop/exclusion zones are in place	Identify drop/exclusion zones     Control access to drop/exclusion zones during work at height (e.g., attendant or physical barriers)	
The rescue plan is in place  The work crew han is ready to be used  The work crew han is ready to be used  The work crew han is ready to be used  The work crew han is rescue or expension of ready to be used  The rescue crew.  The rescue crew.  Is available.  Is aware of spi		The work crew has discussed the rescue plan, including:  How to start the rescue response  Location of rescue equipment and responders  The rescue crew:  is available  is aware of specific hazards related to this task  can execute the rescue plan	

# Confirm these controls/safeguards are in place and verified prior to starting work. Stop and seek help if anything changes.

	Printed Name & Role	Signature	Date
Start-Work Verifier			



# Working at Height

