

Work Permit Management



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What is Work Permit Management?

HOT WORK PERMIT

All temporary operations involving open flames or producing heat and/or sparks require a Hot Work Permit. This includes, but is not limited to, grinding, cutting, grinding, soldering, thawing, and welding.

INSTRUCTIONS FOR THE SAFETY SUPERVISOR

1. Verify procedures listed at right (in the hot permit) with the worker.
2. Complete PLY 1 and return for job file.
3. Post PLY 2 in vicinity of hot work.

DATE: _____ JOB NO: _____

LOCATION (BUILDING, FLOOR & ROOM OR QUARTER): _____

DESCRIPTION OF WORK (IN DETAIL): _____

NAME OF PERSON ISSUING HOT WORK: _____

The above location has been examined, the procedures presented on the Hot Work Checklist have been found to be correct, and permission is authorized for the work.

ISSUED: _____ (Signature of Supervisor)

ISSUED: _____ (Signature of Worker)

ISSUED: _____ (Signature of Safety)

DATE: _____ TIME: _____

EXPIRED: _____ DATE: _____ TIME: _____

PART A

HOT WORK CHECKLIST

☐ Sparklines and heat sources in non-combustible
☐ Hot Work Equipment in good condition (e.g., power source, working leads, cables, etc.)
☐ Work surface for collection of sparks (e.g., sparks can)
☐ Requirements within 35 feet of work:
☐ Gas, oil, flammable liquids and oils
☐ Flammable materials in area removed
☐ Combustible floor (e.g., wood, etc.) removed or covered with fireproof material in the vicinity
☐ Flammable liquids and combustible materials removed
☐ Flammable materials protected with fire blankets, gloves, or heavy clothes
☐ All hot and live fire extinguishers present
☐ Hotspots protected (covered hot work)
WORK ON WALLS OR CEILING
☐ Combustible material removed from other side of wall
WORK IN COMPARTMENTS
☐ Confined space cleared of all combustibles
☐ Electrical ground in non-combustible material
☐ Complete purge of flammable vapors
☐ Follow confined space procedures
FIRE WATCH/NOT WORK AREA MONITORING
☐ Fire watch will be provided during and for 30 minutes after work, including any other in work area
☐ Fire watch is equipped with an extinguisher, and/or other fire-fighting equipment, and/or other extinguishers located throughout work area
☐ Fire watch is trained in use of fire equipment and familiar with location of extinguishers
☐ Fire watch may be required to operate valve of water, steam, and boiler house and cooling
OTHER PRECAUTIONS TAKEN

PLY 1 OUT EMERGENCY INFORMATION (ON BACK OF PLY 1)

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Different Levels of Work Permits

- Work Permits of Level 1
 - High Risk
 - Short Time Frame (1 Shift)

HOT WORK PERMIT

The permit holder must ensure that all safety measures are taken before starting work. The permit is valid for one shift only.

Checklist:

Item	Yes	No
1. Hot work area is properly isolated and fire extinguishers are available.		
2. Hot work area is properly isolated and fire extinguishers are available.		
3. Hot work area is properly isolated and fire extinguishers are available.		
4. Hot work area is properly isolated and fire extinguishers are available.		
5. Hot work area is properly isolated and fire extinguishers are available.		
6. Hot work area is properly isolated and fire extinguishers are available.		
7. Hot work area is properly isolated and fire extinguishers are available.		
8. Hot work area is properly isolated and fire extinguishers are available.		
9. Hot work area is properly isolated and fire extinguishers are available.		
10. Hot work area is properly isolated and fire extinguishers are available.		

OTHER SIDE

THIS PERMIT IS VALID FOR ONE SHIFT ONLY.

- Work Permits of Level 2
 - Lower Risk

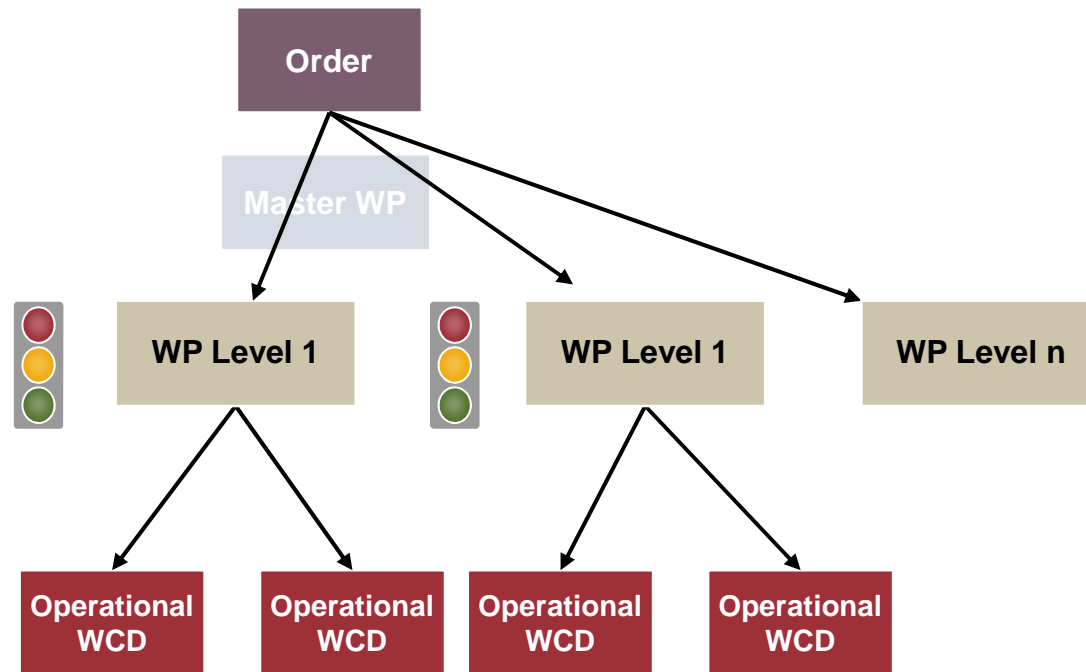


Prerequisites

- Work permit management presupposes the enhanced model.
- If you work with work permits, you must not activate WCM for the operation.
- If you work with work permits, you must not activate valuation.
- In Customizing for Work Clearance Management, you have defined the relevant settings



Architecture



Work Permit Management

Work Clearance Management – Work Permit Management

Work Clearance Management

Work Permit Management

Safety

- Personal
- Assets
- Production



Work Clearance Management

- Approval Process
- Lockout/Tagout
- Conflict Verification
- Integration into Maintenance Processes

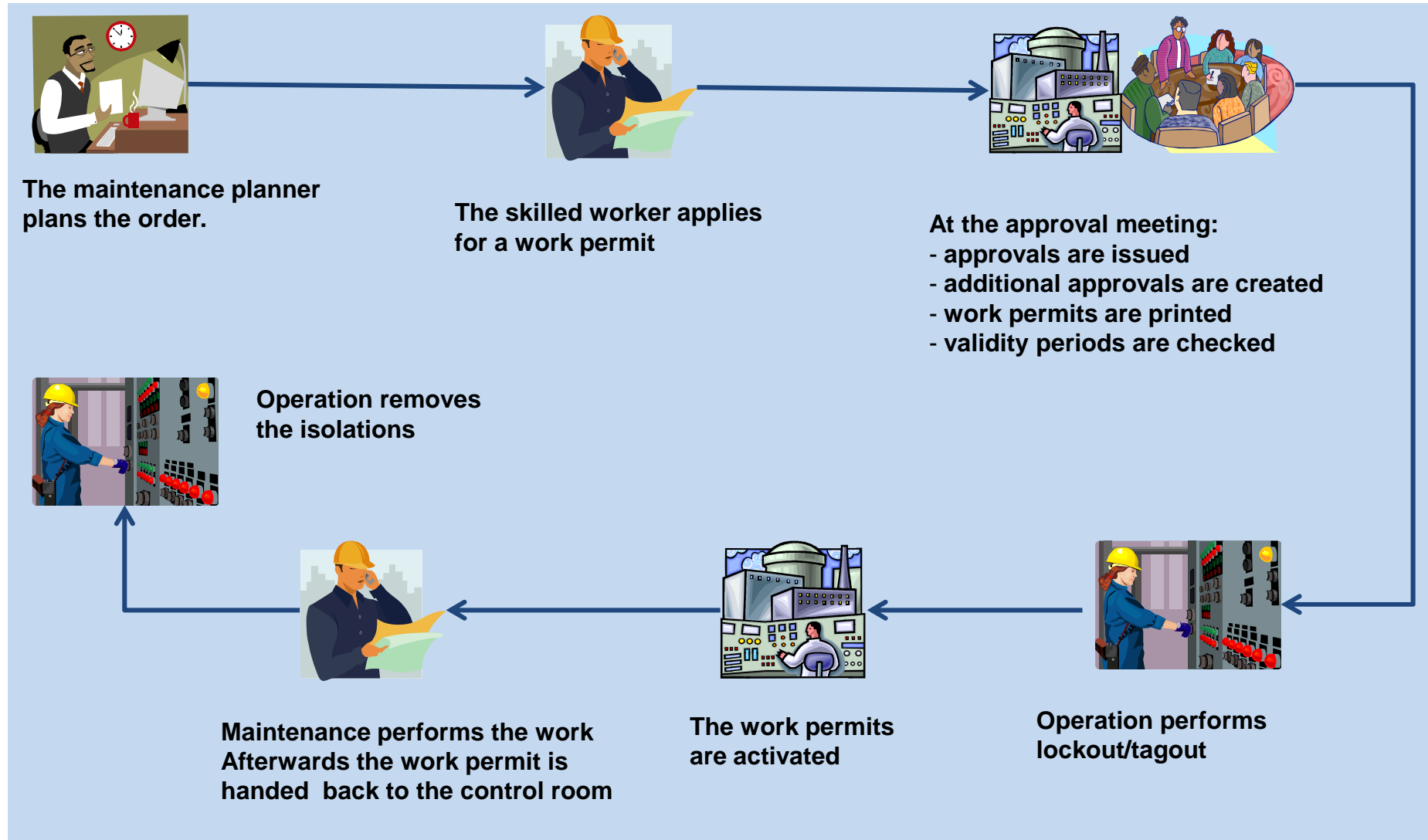


Work Permit Management

- Approval Process
- Different Levels of Work Permits
- Assignment of different Work Permits to an order
- Temporal Control of Work Permits
- Integration into Maintenance Processes



Work Permit Management - Process



Work Permit Management – Process (I)



Order Edit Goto Extras Environment System Help

Create Maintenance order : Operation Overview

Order PM01 %000000000001 Repair Pump

Sys.Status WCM CRTD MANC NTUP

HeaderData Operations Components Costs Partner Objects Additional Data Location

OpAc	SOp	Work ctr	Plant	Con...	Text Ke	S...	Operation short text	LT	Work	Un
0010		MECHANIK	3200	PM01			Visual inspection		0,5 HR	
0020		MECHANIK	3200	PM01			Open pump		0,5 HR	
0030		MECHANIK	3200	PM01			Repair pump, replace wear parts		1,5 HR	
0040		MECHANIK	3200	PM01			Function test		0,5 HR	

- Based on a malfunction, the maintenance planner creates an order.
- The system recognizes that a work permit is required (system status “WCM”).

Work Permit Management – Process (II)



Order Edit Goto Extras Environment System Help

Create Maintenance order : Operation Overview

Work Permits CET

Order PM01 %000000000001 Repair Pump

Sys.Status WCM CRTD MANC NTUP

Work Per Selection

Applic Work Permit

List co

☐ Work Permit Level 1

☒ Work Permit Level 2

✓ ✗

Work Permit

Operation/Activity 4 Entries

OpAc	Operation short text
<input type="checkbox"/> 0010	Visual inspection
<input checked="" type="checkbox"/> 0020	Open pump
<input checked="" type="checkbox"/> 0030	Repair pump, replace wear parts
<input checked="" type="checkbox"/> 0040	Function test

✓ ✗

- A skilled worker applies for a work permit. He creates a work permit level 2.
- He selects the operations of the order which require the work permit.

Work Permit Management – Process (III)



Work Permit Level 2 | Edit | Goto | Extras | System | Help

Create Work Permit Level 2

Identification
Application: Repair Pump | 002

General Data
Status: CRTE | Valid from: 24.07.2010 08:00:00 | Valid to: 07.08.2010 08:00:00 | Priority: 2 2-High | Recall Time: |

Asset Data | Responsibilities | **Work Description** | Requirements

☐ Pressure Testing
☐ Lifting Operations
☐ Wells
☐ Other Activities

Order
Order: %000000000001 Repair Pump
Status: WCM CRTD MANC NTUP

OpAc	Operation short text	Status
0020	Open pump	CRTD
0030	Repair pump, replace wear parts	CRTD
0040	Function test	CRTD

- The selected operations are copied to the work permit.
- At the work permit, additional work and requirements can be defined.

Work Permit Management – Process (IV)



Work Permit Management Software Interface

Menu: Work Permit | Edit | Goto | Extras | Settings | System | Help

Toolbar: [Icons for various functions]

List Editing - Change Orders with Work Permits

Toolbar: [Icons for editing and management]

Order	Applicatn	Typ	Short Text	Valid from	Valid frm	Valid to	Valid to
<input checked="" type="checkbox"/> 846246	206003	2	Repair Pump	24.07.2010	08:00:00	07.08.2010	08:00:00
<input type="checkbox"/> 846245	206002	2	Work Permit - Check drive	22.07.2010	08:00:00	05.08.2010	08:00:00
<input type="checkbox"/> 846245	206001	2	Work Permit Pump 1	22.07.2010	08:00:00	05.08.2010	08:00:00
<input type="checkbox"/> 846245	109409	1	Work Permit L1 Pump 1	22.07.2010	08:00:00	05.08.2010	08:00:00

Selection dialog box:

Work Permit

- ☒ Work Permit Level 1
- ☐ Work Permit Level 2

[OK] [Cancel]

- At the approval meeting the orders and work permits for the next day are discussed.
- For this maintenance order an additional work permit level 1 with a WC document is required.

Work Permit Management – Process (V)



List Edit Goto Order Environment Settings System Help					
Display Orders and Operations: List of Orders and Operations					
Order CET					
S	Order	OpAc	Operation short text	Op.WorkCtr	
	846246	0010	Visual inspection	MECHANIK	
		0020	Open pump	MECHANIK	
		0030	Repair pump, replace wear parts	MECHANIK	
		0040	Function test	MECHANIK	

- A new work permit level 1 is created and the relevant order operations are selected.
- The different levels of work permits reflect the different levels of risk and safety requirements.

Work Permit Management – Process (VI)



Work Permit Level 1 | Edit | Goto | Extras | System | Help

Create Work Permit Level 1

Operational WCDs | SJA

Identification

Application: Repair Pump 001

General Data

Status: CRTE abc

Valid from: 24.07.2010 08:00:00 Valid to: 24.07.2010 16:00:00

Priority: 2 2-High Recall Time:

Asset Data | Responsibilities | Work Description | Requirements

Requirements (1)

- ☐ Guard/Radio
- ☒ Barriers/Signs
- ☒ PA Announcements
- ☐ Job Safety Analysis
- ☒ Lockout/Tagout

Requirements (2)

- ☒ Depressurization
- ☒ Draining/Emptying
- ☐ Prevent Oil and Gas
- ☐ Radioact. Radiation
- ☒ Fire Prevention

- Relevant requirements will be marked.
- A WC document will be created and assigned to the work permit.

Work Permit Management – Process (VII)



Work Permit Management Software Interface

Menu: Work Permit | Edit | Goto | Extras | Settings | System | Help

Toolbar: Create Work Permit (Ctrl+F6), Copy Work Permit (Ctrl+F7), Change Work Permits (Shift+F4), Print Work Permits

Functions:

- Set Prepared
- Revoke Prepared
- Complete
- Reject
- Deactivate
- Activate
- Set Deletion Flag
- Remove Deletion Flag

Table:

	Valid from	Valid frm	Valid to	Valid to
846246 206003 2 Repair Pum	24.07.2010	08:00:00	07.08.2010	08:00:00
846246 109410 1 Repair Pum	24.07.2010	08:00:00	24.07.2010	16:00:00
846245 206002 2 Work Permi	22.07.2010	08:00:00	05.08.2010	08:00:00
846245 206001 2 Work Permi	22.07.2010	08:00:00	05.08.2010	08:00:00
846245 109409 1 Work Permi	22.07.2010	08:00:00	22.07.2010	16:00:00

- The work permits are selected and the system status „Prepared“ is set.

Work Permit Management – Process (VIII)



Work Permit Level 2 Edit Goto Extras System Help

Change Work Permit Level 2

Identification

Application 206003 Repair Pump

Approvals - Work Permit Level 2

Permit	Short Text	Cat	Pr	LT	PI	Approv. by	Ent. by	Cr
OPR_SUP	Operation Supervisor	3						
APPROVED	Pre_Approved	1	□□					
ACTIVE	Active	S						

Issue

- The responsible persons issue their approvals at the approval meeting.

Work Permit Management – Process (IX)



Work Permit Level 1 Edit Goto Extras System Help

Change Work Permit Level 1

Extend Operational WCDs SJA

Identification
Application 109410 Repair Pump

Approvals - Work Permit Level 1

Permit	Short Text	Cat	Pr	LT	PI	Approv. by	Ent. by	Cr
OPR_SUP	Operation Supervisor	3						
SEN_APP	Senior Approver	5						
APPROVED	Pre_Approved	1						
TAGGED	Tagging Confirmed	2						
ACTIVE	Active	S						

Issue

- The work permit level 1 has higher safety requirements and additional approvals have to be issued.

Work Permit Management – Process (X)



Work Permit Management Software Interface

Menu: Work Permit | Edit | Goto | Extras | Settings | System | Help

Toolbar: Create Work Permit (Ctrl+F6), Copy Work Permit (Ctrl+F7), Change Work Permits (Shift+F4), Print Work Permits (highlighted), Functions, Exit

Buttons: Permit, Work Permit, Work Permits, Extend

				Valid from	Valid frm	Valid to	Valid to	
<input checked="" type="checkbox"/>	846246	206003	2	Repair Pump	24.07.2010	08:00:00	07.08.2010	08:00:00
<input checked="" type="checkbox"/>	846246	109410	1	Repair Pump	24.07.2010	08:00:00	24.07.2010	16:00:00
<input type="checkbox"/>	846245	206002	2	Work Permit - Check drive	22.07.2010	08:00:00	05.08.2010	08:00:00
<input type="checkbox"/>	846245	206001	2	Work Permit Pump 1	22.07.2010	08:00:00	05.08.2010	08:00:00
<input type="checkbox"/>	846245	109409	1	Work Permit L1 Pump 1	22.07.2010	08:00:00	22.07.2010	16:00:00

- The work permit is printed at the control room.
- Next morning the skilled worker pick up his work permits. Different levels of work permits might have different validity periods.

Work Permit Management – Process (XI)



Operational WCD Edit Goto Extras Switch System Help

Change Operational WCD: Switching Screen

Untag Untag Temporarily

WC Document 57602 Repair Pump

Status PREP PROC **ETG**

CONF	ITG	BTG	ETG	BTUG	ETUG	BUG	EUG	PROT	INAC
0	0	0	1	0	0	0	0	0	0

1	2	Item	IC	Technical Object	Short Text	OG	Tag. Cond.
		10	F	WPAAZSIP02	Pump 2	E	OFF

- Operation process the isolation. As soon as all isolations are confirmed, the system status „ETG“ is set on the header of the WC document.

Work Permit Management – Process (XII)



Work Permit Management – Process (XII)

Work Permit Edit Goto Extras Settings System Help

List Editing - Change Orders with Work Permits

Work Permit Work Permit Work Permits Extend

Order	Applicatn	Typ	Short Text	Valid from	Valid frm	Valid to	Valid to
<input type="checkbox"/> 846246	206003	2	Repair Pump	24.07.2010	08:00:00	07.08.2010	08:00:00
<input checked="" type="checkbox"/> 846246	109410	1	Repair Pump	24.07.2010	08:00:00	24.07.2010	16:00:00

Work Permit Management – Process (XII)

Work Permit Edit Goto Extras Settings System Help

List Editing - Change Orders with Work Permits

Work Permit Work Permit Work Permits Extend

Order	Applicatn	Typ	Short Text	Valid from	Valid frm	Valid to	Valid to
<input type="checkbox"/> 846246	206003	2	Repair Pump	24.07.2010	08:00:00	07.08.2010	08:00:00
<input checked="" type="checkbox"/> 846246	109410	1	Repair Pump	24.07.2010	08:00:00	24.07.2010	20:00:00

- The validity period can be extended based on the settings of the system configuration.

Work Permit Management – Process (XIII)



Work Permit Edit Goto Extras Settings System Help

List Editing - Change Orders with Work Permits

Order	Applicatn	Typ	Short Text	Valid from	Valid frm	Valid to	Valid to	System status
<input checked="" type="checkbox"/> 846246	206003	2	Repair Pump	24.07.2010	08:00:00	07.08.2010	08:00:00	PREP CLSD PWP
<input checked="" type="checkbox"/> 846246	109410	1	Repair Pump	24.07.2010	08:00:00	24.07.2010	20:00:00	PREP CLSD PWP
<input type="checkbox"/> 846245	206002	2	Work Permit - Check drive	22.07.2010	08:00:00	05.08.2010	08:00:00	CRTE
<input type="checkbox"/> 846245	206001	2	Work Permit Pump 1	22.07.2010	08:00:00	05.08.2010	08:00:00	CRTE
<input type="checkbox"/> 846245	109409	1	Work Permit L1 Pump 1	22.07.2010	08:00:00	22.07.2010	16:00:00	CRTE

- When the maintenance work is finished, the skilled worker brings the work permit back to the control room.
- The isolations can be removed.

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