



Institute for *Plasma Research*

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Permit to Work System and Its Implementation

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Introduction

- ✿ Accident is an unplanned, unforeseen event in which injury , loss of life, loss of property and/or damage to the environment may be there.
- ✿ Accidents may take place during maintenance job due to presence of chemicals, pressure, temperature , defective tools, oxygen deficiency, fall of a person, fall of objects, etc.
- ✿ To avoid such types of accidents, *permit to work system* needs to be followed.

Legal Requirements

It is a mandatory requirement to follow the “Permit to work system” as per section 87 (dangerous operation) of factory act and sub rule 20 of Rule 88(schedule-II) of Atomic Energy Factories Rules, 1996.

Aim & Purpose

- ✿ The sole aim of the *permit to work system* is to carry out critical works/jobs in a safe manner.
- ✿ The purpose of the *Permit to work system* is to identify hazards associated with a non-routine job, and to take precautions required to control each hazard identified.

Goal & Objective

- ✿ At the end of this session you will be familiar with *Permit to Work System* and also jobs/works requiring Permit to Work.

Advantages of PTW system

- ✿ A written document.
- ✿ Systematic work.
- ✿ Maintenance job can be completed comfortably and safely.
- ✿ Quality of work will be better.
- ✿ Work culture improves.
- ✿ Image of organization improves.
- ✿ Chances of accident is less.

Work Required PTW

Considering the Hazards & the level of Risks associated with the activities, following works require Permit to Work :

- ✿ Electrical Work
- ✿ Confined Space Entry
- ✿ Lifting Activities
- ✿ Working at Height
- ✿ Hot Work
- ✿ Excavation Work

Work Required PTW

Electrical Work: It includes,

- ✿ Repair/Maintenance/Testing, getting megger value in 132KV switch yard equipments like breakers, CTs, PTs, Isolators, 11 KV panels, etc.
- ✿ Repair/Maintenance of 11KV, 415 V main electrical panels, distribution panels, new cable connection, extension and commissioning of electrical panels, downstream feeders, loads, etc.
- ✿ Repair/Maintenance of Equipment which needs electrical isolation, i.e. street lighting, boundary wall lighting, watch tower lighting, borewell connections, etc., whenever necessary.
- ✿ Any electrification work which may require tagging/LOTO, etc.

Work Required PTW

Confined Space Entry:

Confined space has limited or restricted means for entry and exit and it is not designed for continuous occupancy of workers/employees. e.g., work to be carried out inside vessel, machine, storage tank, cable trench, filter, etc.

Work Required PTW

Lifting Activities:

Lifting Activities covers loading, unloading or lifting of materials/equipments/machinaries using cranes, chain pulley, slings, ropes, etc.

Work Required PTW

Working At Height:

Working at height means work carried on height above 2 meter, a place where a person could be injured falling from the height.

Work Required PTW

Hot Work:

Hot Work means the use of open flame, oxyacetylene burning, cutting, grinding, etc. and the use of spark or heat producing equipment in operational areas,

Work Required PTW

Excavation Work:

Excavation means any cut, cavity or trench by man-made/machine-made in the earth's surface formed by earth removal.

Work Permit Format



Permit to Work Procedure

- ✿ Work permit form will be filled by the person to whom work permit to be issued. It must be filled in duplicate.
- ✿ Work permit is always issued to concerned personnel of IPR. Work permit never issued to any contractor. If the work is conducted by the Contractor then mention contractor's name and address on the work permit.
- ✿ Work permit is accepted by the Permittee. The permittee shall be the person who will carry out or under his/her supervision the work will be done.
- ✿ Work permit is authorized by concerned Group Leader/Division Head.
- ✿ Safety Check verified by respective Safety Co-ordinator or Safety Officer.

Responsibilities of Permit Acceptor

- ✿ Secure necessary permit from the concerned group/division before commencement of work.
- ✿ Provide for and comply with all necessary precautionary measures stipulated in the permit. Ensure that all safety equipment are in good working condition and available at site prior to commencement of the work.
- ✿ Ensure safe working practice throughout the work by continuous supervision.
- ✿ Ensure that the permit is readily available at the work site for verification, as and when required.
- ✿ Maintain good housekeeping practice during the work.

Responsibilities of Permittee

- * Stipulate precautionary measures such as area preparation, blinding/isolation/tagging, provision of safety and fire protection equipments, standby personnel, etc. and ensure their compliance.
- * Ensure that the facilities and the area in and around the work site where the permit is made safe prior to commencement and during the progress of the work.
- * Ensure that PPEs are available at site before commencement of the work and the same is used by personnel while performing the work.
- * After completion of the work, should thoroughly check the area for good housekeeping and safe working condition and then shall close the permit.
- * Shall stop the work at any time, if he/she presumed that the work is being done in unsafe manner which may result injury or damage to the property.

Responsibilities of Group Leader/Division Head

- ✿ Group Leader/Division Head may visit the site to confirm that the conditions of the permit can be met, may brief to the permit acceptor, advise any other persons who may be affected and satisfy himself/herself that the work can proceed in a safe manner.
- ✿ When the work is going to continue beyond the valid date and time as mentioned in the permit, then GL/DH may visit the site again and authorize for continuation of the permit. Without authorization for continuation of work by GL/DH the work will not start.
- ✿ Shall stop the work at any time, if he/she presumed that the work is being done in unsafe manner which may result injury or damage to the property.

Responsibilities of Safety Co-ordinator or Safety Officer

- ✿ Safety Co-ordinator or Safety Officer must visit the site to confirm that the conditions of the permit can be met, may brief to the permit acceptor, permittee, advise any other persons who may be affected and satisfy himself that the work can proceed in a safe manner.
- ✿ Follow up periodically the progress of the work and may stop the work at any time, if conditions become unsafe till the time safe conditions are restored.

Period of Validity


- ✿ Generally, permit to work shall be issued from sunrise to sunset.
- ✿ If work is allowed after sunset, then the site shall be re-visited by GL/DH to assess and confirm that the permit conditions have not changed and then renew/extend the permit.

Retention of Permit to Work


- ✿ A register must be maintained for completed permits and shall be retained by the permittee/safety coordinator/representative as nominated by respective group leader/division head for the one year.

Questions???





**Expecting your
Co-operation
for
Implementation
of the system**



**Thank You for your
valuable time**