

ENERGY ISOLATION – LOCK-OUT & TAG –OUT

Energy can be defined as the ability to do work. Energy powers the world around us. Everything that surrounds us function because of various types of energy. As vital and beneficial it may be it can have harmful consequences if not managed properly. Being exposed to any form of energy beyond acceptable limits can be dangerous.



Energy Contact



The most common instances when people come in contact with hazardous energies is during the installation, service, maintenance or repair/rectification (service) of an equipment / machinery or unit (system).



Improperly and inadequately isolated or controlled energy sources/streams can harm personnel who are engaged in the service of systems.



Stored energy that is not released or controlled prior to working on the system.

Pre-Work



Pre work evaluation

- Do a thorough evaluation of the system that is going to be worked upon. Define the system boundaries and identify energy streams going into and out of the system boundaries.
- Identify energy isolation points of the energy streams that go into and out of the system.



Notify

- Identify all stakeholders and personnel who will be impacted by the shutdown of the system/equipment.
- Notify them and obtain all necessary approvals.



Lockout / Tag out Procedures

Isolation lock-out & tag -out

- De-energize the system and make sure all controls are at neutral/zero position.
- Isolate the identified energy isolation points identified in "Pre work evaluation".
- Apply restraining locks on the device such that it cannot be operated by unauthorized personnel. In addition to this place warning tags on the device.
- In case the device cannot be restrained using a lock or tag. Use alternative methods to safely secure the energy isolation device. A thorough risk assessment is required to be done if alternate methods are used.

Before Starting Work on the System



Verify system energy isolation by either operating the machine controls or using verification/testing equipment.



Ensure that all stored energy is released or secured.



Adequate barricades are installed and warning signages posted.



Stored energy can be non-perceptible and equally dangerous.

Work Completion: Re-energizing the System



Ensure that all the internal/external system connections are operationally intact and there are no compromised sections.



Ensure that all system controls are in the neutral/off position.



Ensure that the area is cleared of all personnel and work equipment