

This is an extract from IOGP Report 577 - Fabrication site construction safety recommended practice - Hazardous activities, version 1.2 published November 2018. IOGP Reports are subject to regular review and update. In all cases only the current version of Report 577 is authentic.

## 5. Energy isolation/Lock-out Tag-out

**This section identifies and controls energy sources which must be made safe before work begins (e.g. electrical, pneumatic, mechanical, thermal, hydraulic, chemical, gravity, rotational).**

- 1) An energy isolation and de-isolation (energy control) procedure is documented to ensure that potential energy sources for work activities are pre-planned, identified, isolation verified and test started to demonstrate zero energy is performed before work begins. Provisions are in place to address extended period isolations and re-energizing for test purposes.
- 2) The acceptable standards of isolation used in the fabrication site are defined (e.g. locked switches, racked out breakers, air gap in piping, double block and bleed valves, fans immobilized, etc.).
- 3) The personnel responsible for identifying, implementing, and verifying required isolations are listed on a register. Training that describes the procedure and how to fulfill their roles and responsibilities is provided. Training is provided for all personnel working under or impacted by the energy control procedure.
- 4) All energy control devices are as close to the work site as possible, have an attached tag identifying the person who applied the isolation, the date and purpose of isolation, and a statement such as “Do Not Start” or “Do Not Operate”. Tags used without an energy control device are not acceptable for isolation.
- 5) Energy isolation is documented by the responsible person and is either attached to, or part of, the work permit identifying the isolations implemented prior to commencement of the work activities, which are reversed before Permit to Work is closed out. The existence of multiple energy sources to individual pieces of equipment are identified and recorded by the responsible person.
- 6) Prior to the commencement of work, a pre-work meeting at the work place occurs with the work team and the authorized person to confirm that all isolations are in place.
- 7) When two or more tasks require isolation at the same point, each job is identified and locked independently.
- 8) After isolation, locking and tagging, energy sources are tested or otherwise checked to verify zero energy prior to the commencement of work activities.
- 9) Work handover between shifts includes verification of energy isolation to ensure continuity of protection.

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- 10) Prior to authorizing de-isolation the Responsible Person ensures that:
  - equipment/systems that were isolated are now safe to energize
  - the status of the isolation device(s) enables safe de-isolation
  - all work on the Permit to Work has been completed satisfactorily
  - any areas or operations that may be affected by the de-isolation are identified
  - any communications considered necessary or appropriate have been carried out.
- 11) The procedure includes de-isolation in special conditions such as an emergency, the key is lost, or the responsible individual has left the workplace. The worksite identifies a person, or delegate in charge, whose approval is required to de-isolate in these circumstances.
- 12) Compliance with the energy isolation and de-isolation (energy control) procedure and practice is audited as part of the Permit to Work process.
- 13) When the equipment or module is transported out of the site, there is a handover energy isolation register that records the status of all energy isolations in place, including any long term over rides. This register is handed over to the future operator of the module/equipment.

### Relevant IOGP Life-Saving Rules, Report 459



Verify isolation and zero energy before work begins



Work with a valid permit when required



Obtain authorisation before overriding or disabling safety controls