

Proper Understanding of LOTO (locking device, signage) Working Procedure



What is LOTO (locking device & signage)?

LOTO stands for "Lock-Out, Tag-Out" which means the measures for installation of a **locking device** or **signage** at the **starting device** in order to **prevent** others from operation a machine after the operating of the machine concerned is suspended for the purpose of **maintenance/cleaning/repair** works.



Applicable statutes : Article 92 of the Local Rule of Occupational Safety and Health



Why is LOTO Working Procedure required?

- ▶ Because over 40 people are killed every year because of unannounced operation of machine/facility during maintenance/cleaning/repair works at workplaces, **LOTO(Lock-out,Tag-out) Working Procedure** needs to be fully complied with in order to secure safety for workers.



What operations are in need of the LOTO Working Procedure?

- ▶ Upon operations of maintenance/cleaning/repair works of machine/facility at a worksite
 - ▶ Operations to remove safety devices from or temporarily suspend the machine/facility;
 - ▶ Operations where part of a worker's body approaches near operating parts of a machine or hazardous sites while the machine/facility is in operation;
 - ▶ Operations prone for risks of unannounced mobilization due to mal-operation during maintenance works, etc.;



LOTO WORKING PROCEDURE

- Preparation for Power Shut-off** : Notice of operational details to relevant workers prior to operation.
- Operational Suspension of Machine/Facility** : Suspension of operation of relevant machine/facility according to the predetermined order
- Power Shut-off & Verification of Current Energy** : Verification of residual energy by clearly shutting off the main power source for the machine/facility.
- LOTO Installation** : An operator in charge shall keep individual keys after installing locking device and signage at the power supply.
- Work Implementation** : Implementation of maintenance/cleaning/repair work following verification of stoppage of machine/facility
- Inspection & Verification** : Verification of surrounding conditions of machine/facility and safety of related workers.
- Release of LOTO** : An operator in charge shall directly release the locking device and signage.
- Re-Operation of Machine/Facility** : Notice of relevant details to related workers following completion.



LOTO Types

▶ Locking Device

Control of Electric Energy

Electrical locking device



Locking device for starting switch



Control of Hydraulic/Pneumatic/Steam Energy

Locking device for gate valve



Locking device for ball valve

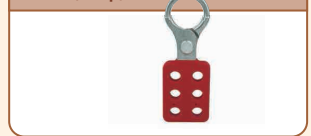


Lock & Latch

Lock



Latch (Hasp)



▶ Signage



※ Photos of these products are not affiliated with KOSHA



Checklist for LOTO Inspection

Name of Workplace	
Department	
Location	
Name of Equipment	

Items for Evaluation		Yes	No
1	Whether LOTO procedures by each machine/facility are prepared in detail?		
2	How the workers' training on LOTO Procedure been conducted?		
3	Is the worker aware of the hazardous energy sources required to be locked for the machine/facility concerned?		
4	Have all workers been notified before the LOTO Working Procedure commences?		
5	Have workers been designated for repair works by each machine/facility upon the use of LOTO?		
6	Are the workers in full compliance with the LOTO Working Procedure, including shut-off of the power supply for machine/facility?		
7	Are the workers verifying the followings prior to disassembly of LOTO? 7-1. Has he/she checked whether operational conditions are satisfactory through inspection of the machine/facility? 7-2. Has he/she checked if other workers are safely stationed?		
8	Have all workers been notified that the LOTO device has been removed?		

Other Compliance Issues

- When machine/facility is newly installed, changed, repaired or replaced, is the structure of such machine/facility designed for the energy blocking device to be easily locked by a worker? Yes ☐ No ☐
- When workers alternate due to shift work during the performance of LOTO Working Procedure, does the replacing worker fasten the lock first? Yes ☐ No ☐
- When the energy blocking device is inoperable, is a warning, "Do NOT operate the mechanical equipment currently under the control," being issued with the signage (Tag Out) and firmly installed at locations easily visible to other workers? Yes ☐ No ☐