



## ENERGY AND MACHINERY

Let's discuss one of the leading causes of workplace injuries: the unexpected start-up of machines and processes while employees are working on them to make adjustments or perform maintenance.

To prevent accidental start-ups, we need to do everything we can to shut down the energy source and isolate the machinery or process. Our machinery and processes are extremely safe – but like anything that is powered by electricity, fluids, gases, compressed air, or steam, they can be dangerous. Power sources that can cause equipment or process movement can also cause injury or damage. Gravity also is a power source.

So we need to be sure that we protect ourselves and our operations from:

- 1) Energy source itself;
- 2) Accidental or unintentional operation of the equipment or process because the power has not been cut off when it should have been.

If you need to service, adjust or repair any piece of equipment or part of a process system, make sure that you shut off power sources and relieve the system of whatever stored up energy it has. This means shutting and bleeding off fluids and gases, returning mechanical parts to rest and disconnecting electrical power. You must totally de-energize equipment or processes by returning them to a state of rest and cutting off power sources.

But that is not all. You also need to make sure that no one else can activate the equipment. Remember, someone else can return power to a piece of equipment or a process while you are in the middle or working on it. So have procedures and a system for preventing that from happening.

For safety's sake, it is absolutely necessary that you follow the procedures established for this and that the people who work around you are aware of those procedures and the reasons for them.