



## Health and Safety Bulletin No. 16

### Incorrect use of a pipe wrench on a drilling rig

**Date: 6 June 2024**

#### Background

Recently, several incidents have occurred where workers have been seriously injured while working with a pipe wrench and a drilling rod on a live drill rig.

In December 2021, WorkSafe prosecuted an exploration company for the death of a worker where a 48-inch pipe wrench struck the worker in the head. At the time of the incident a pipe wrench and hydraulic breakout wrench were being used by workers to crack or “break out” bound threads between the head tube locking sub and air swivel while applying hydraulic rotation.

Pipe wrenches are not designed to be used under hydraulic power. However, they are frequently placed on drill rigs to assist with separating drilling rods, specifically when they become cross threaded.

#### Summary of hazard

- Working in the vicinity of a pipe wrench that is attached to any part of the drill being rotated under hydraulic power.
- Incorrect pipe wrench use can result in workers being struck by the hand tool, resulting in serious or fatal injury.

#### Contributory factors

- Workers are unaware of the potential risks involved when using a pipe wrench on a drill rig under hydraulic power.
- Workers not following rod break out procedures.
- Workers unaware that a pipe wrench is designed as a hand tool only.
- No formal risk assessment, safe work procedure (SWP) or job hazard analysis (JHA) conducted for the task.
- The hydraulic or mechanical drill rig is energised when the pipe wrench is placed on the rod pipe.

#### Recommendations

The person conducting the business or undertaking, including a mine operator, must implement controls to prevent similar incidents occurring.

- Pipe wrenches are designed to be used as a hand tool and must only be used in line with the manufacturer’s recommendations.

- Pipe wrenches should not be used on energised hydraulic or machine-powered equipment.
- Plant must be correctly isolated and de-energised before maintenance is conducted using a hand tool.
- Workers must be adequately supervised and trained on the proper use of tools, including pipe wrenches, and safe maintenance procedures.
- A risk assessment must be conducted and a safe work procedure (SWP) or job hazard analysis (JHA) developed for the maintenance of plant.
- Workers must be adequately trained to conduct a risk assessment and follow the SWP or JHA.
- Workers must be provided with personal protective equipment and trained in its use.

### Further information

#### Department of Energy, Mines, Industry Regulation and Safety

##### WorkSafe

- Significant Incident Report No. 113 [Driller's offsider struck by "Stillson" type wrench](#)
- Safety Alert 04/2018 [Worker fatally injured during maintenance work to a rock drilling truck](#)