BEST PRACTICE

LOCATION:	**Quarry**	**ARTICLE YEAR**	**2022**
ACTIVITY:	**Power tools and battery safety**	**COMPANY:**	**Tillicoultry Quarries Ltd**
SUB ACTIVITY:	**No Sub Activity Available**	**COMPANY LOCATION:**	**Northfield Qu\rry**
BEST PRACTICE No:	**BP2188**	**COMPANY TEL:**	**0000**
COUNTRY OF ORIGIN:			

TITLE Run Video

Lithium battery – Recharger cabinet

ARTICLE

Highly Commended

An incident occurred at one of our quarries involving a battery powered impact gun. One of the operators put the battery onto charge in the tool store, which was located in a steel container. Two hours later it was recognised that smoke and visible flames were coming from tool store, the emergency services were called, and the power isolated. The photograph demonstrates the exact nature of the damage created.

Findings established during the investigation.

- The incident occurred at the charging point for the impact gun charger / lithium-ion battery.
- The impact gun is powered by an 18-volt lithium battery that is charged within a stand-alone 240v charger unit.
- Plant operator put the battery onto charge in the tool store in an 20ft steel container, no defects with the charger or battery were noticed on the pre-charge inspection.

It was situated on a metal shelf and the charger was plugged into 240v internal fitted 3 pin socket which was used on a regular basis with no issues or faults reported.

Following the above incident it was discussed, at an internal business meeting, how this could be avoided in the future. One of our quarry managers engaged with their quarry engineer to fully review the incident to formulate ideas to prevent a reoccurrence.

The engineer carried out a risk analysis of charging these types of batteries and started to look at the Hierarchy of Control. The charging of batteries could not be eliminated or substituted as returning to mains cabled power tools in a quarrying environment was reintroducing risk to the operations that had been eliminated with the introduction of battery powered tools.

Please see the **additional pdf**, the images below and the video to find out about the solution developed to reduce the risk of fire when re-charging the batteries.

ARTICLE IMAGES