MinEx
Health and Safety in NZ extractives

NZ Safety Alert

Let's work together to keep ourselves and our workers safe

July 2019

Faulty pressure gauge

A subcontractor was performing splicing of a conveyor belt (joining the belt with pressure and heat) on a mobile crushing plant when a clamping bolt on the vulcaniser failed and part of the vulcaniser catapulted around 5 metres into the air. The part, weighing approximately 50kgs, landed on the back end of the contractor's van and smashed the rear window.

Top half of the vulcaniser where it has been bent while it catapulted off the belt

During the normal vulcanising (splicing) process the belt is regularly checked to ensure a good "cook" is occurring. This involves the contractor getting up next to the vulcaniser. This check had been conducted two minutes before the incident exposing the subcontractor to significant risk of injury.

An investigation found that the vulcaniser had a faulty pressure gauge, resulting in the vulcaniser being pressurized to 150 PSI, almost twice the normal pressure of 90 PSI.

MinEx data on incidents with the potential to cause harm over the 2 years to March 2019 shows that 7% of all incidents result from release of pressure of which 32 incidents result from release of hydraulic pressure.

You need to ensure that:

1. Regular and appropriate checks are made of all pressure gauges. Monthly inspections include pressure vessels and gauges.
2. Where practical, compressors are fitted with pressure gauges so that a secondary check system is maintained.
3. Appropriate checks are made of equipment supplied and used by contractors to ensure it is fit for purpose.
4. Workers, including contractors, are trained and assessed as competent to operate pressurised systems and equipment.

Know of an incident or near miss? Please share the learnings with us.