

How Safe are Longwall High Pressure Hydraulic systems

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16 May 2007

What we did

- We produced a spreadsheet of all the incidents reported to CMS Insurance that had words associated with “longwall, hydraulics, oil, fluid etc” from 1998 to 2006
- This resulted in a list of about 3,120 incidents that had been reported as actual or potential claims

There were lots of incidents that had nothing to do with hydraulics

- WHILE WALKING TO MG IN LONGWALL WITH TOOL BAG & SPARE BAG ON EACH SHOULDER HAD TO WALK OVER A MOUND OF COAL ON WALKWAY & HIT HIS HEAD ON SIDE SHIELD OF PLATE CAUSING NECK STRAIN



**There were some incidents where
is was not clear whether it was a
component failure or unsafe
isolation or error in a maintenance
activity**

- WHILE ASSISTING FITTER TO SERVICE CHOCKS A PRESSURISED HOSE CAME ADRIFT CAUSING SOLSENIC TO GO INTO HIS R/EYE & R/EAR

There were some incidents that occurred due to unsafe isolation

- WHILE REMOVING HOSE FROM DA RAM VALVE BLOCK RESIDUAL LINE PRESSURE RELEASED FROM CIRCUIT SPRAYING HIGH PRESSURE HYDRAULIC FLUID INTO HIS EYES - CHEMICAL INJURY

There were some incidents that occurred due to hose or fitting failure

- WHILE HE WAS STANDING ON NO19 CHOCK MOVING NO20 CHOCK WHEN A 25MM HIGH PRESSURE HOSE RUPTURED CAUSING FLUID TO STRIKE R/SIDE OF HIS HEAD - NECK & BACK - BRUISE



All the hydraulic related incidents were categorised with one of the following:

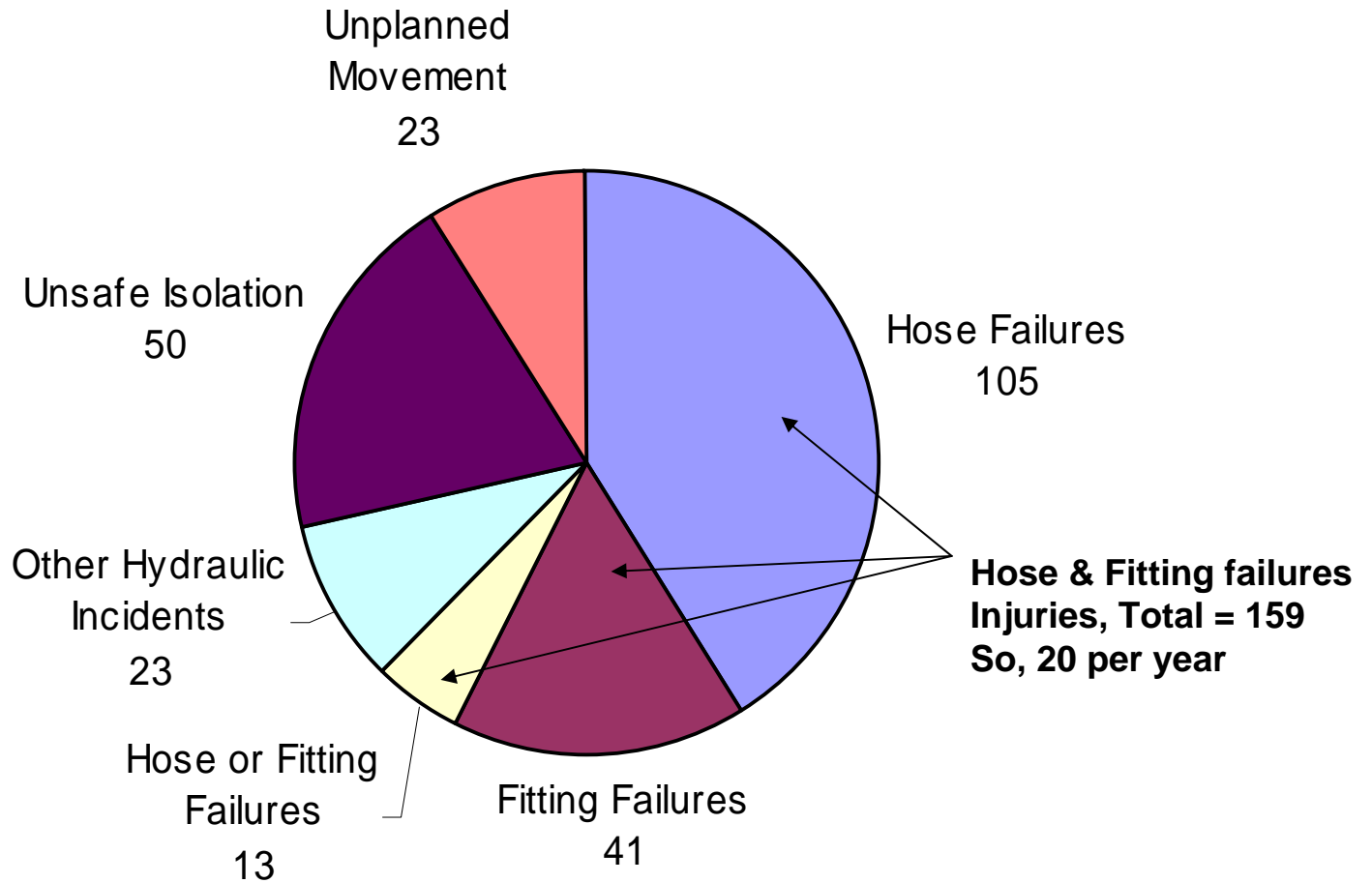
- Hose failure
- Fitting failure
- Hose or fitting failure
- Other
- Unsafe Isolation
- Unplanned movement



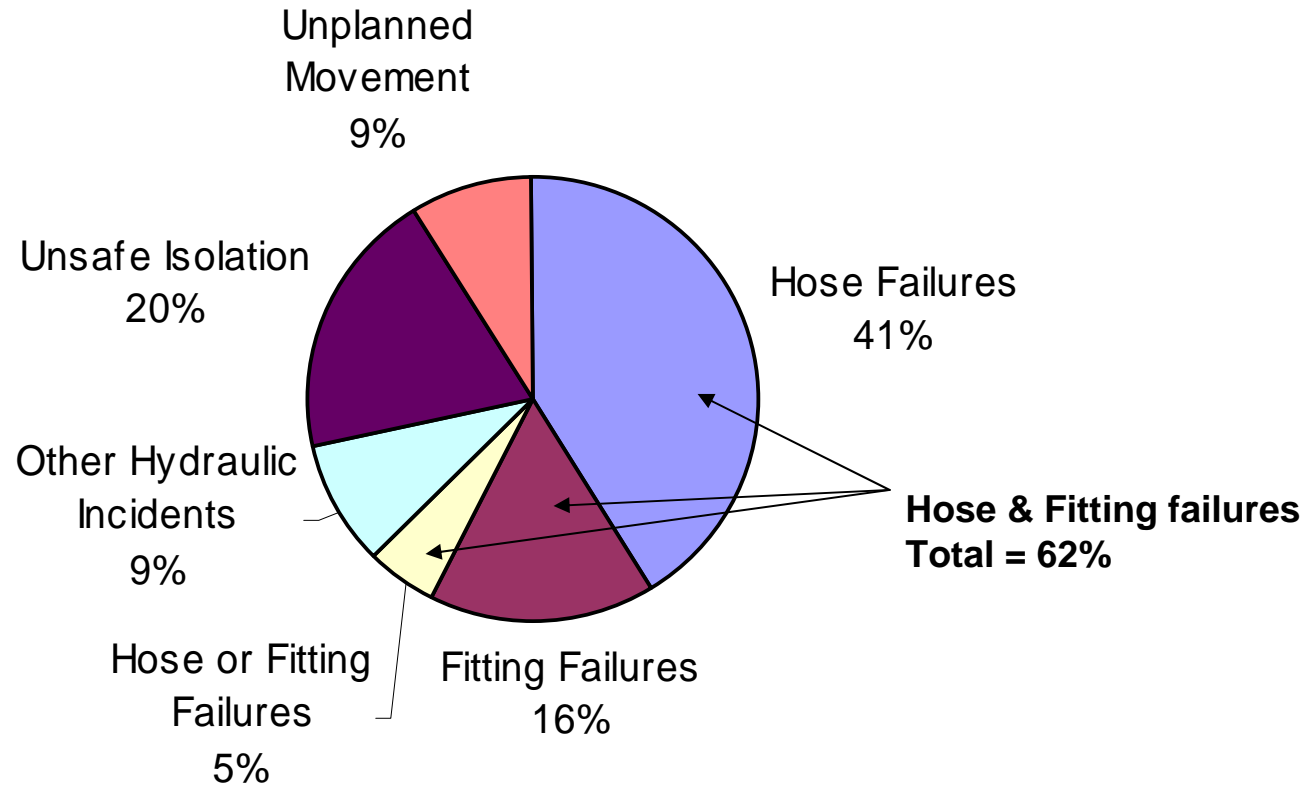
The 3,120 incidents in the data base were reduced to 255 that were connected to the longwall hydraulic system.

Approx 32 reported per year ! Just in NSW

255 Longwall Hydraulic Incidents over 8 years from C.M.S. Insurance

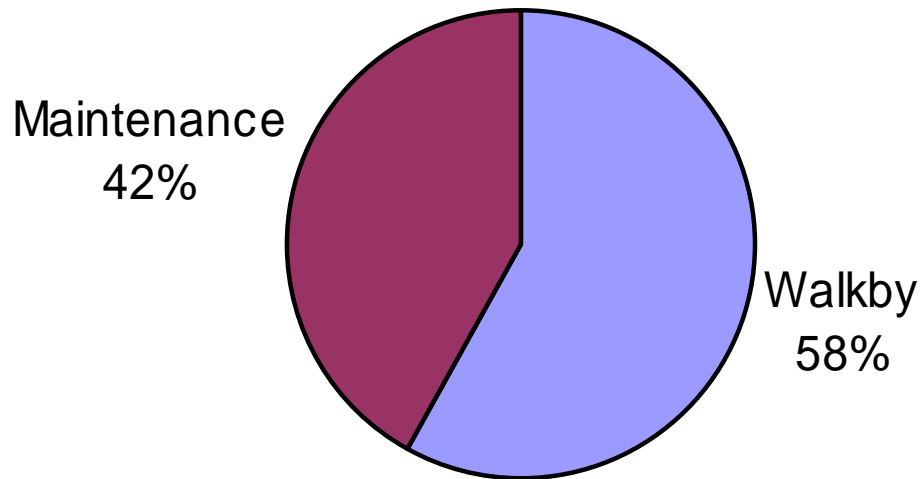


Longwall Hydraulic Incidents

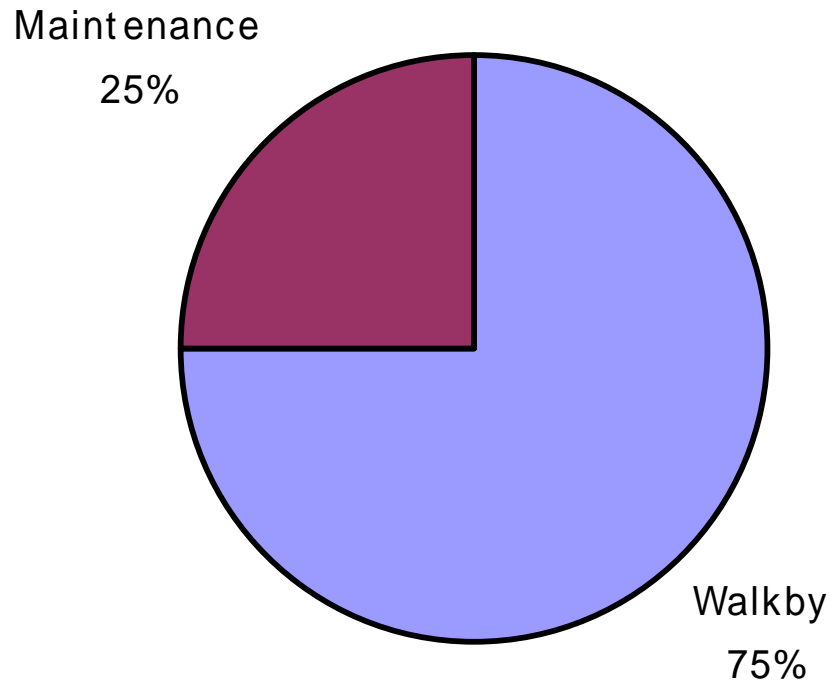


All the incidents were then also given a tag as to whether they occurred during a maintenance activity or during normal operations.

255 Incidents



Hose or Fitting Failure 159 Incidents



Conclusions

- There are a lot of injuries reported each year from hose and fitting failures
- There must be many more failures that do not cause injuries, but cause production down time
- The level of detail in the data we have does not allow the real cause of the failures to be understood
- Until the reasons for the failures are understood they cannot be fixed
- Fixing hose and fittings failures will give a lot of immediate benefit