


Port Safety

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- Over 20 years working in the ports industry
- MD of ship discharge operation (Westfield Plant & Management Services)
- Ports and Skills guidance groups



Swapped out men and skid steers
for excavators

A night-time photograph showing the interior of a ship's hold. The hold is a large, dark, rectangular space with concrete walls and a dark floor. Several people are visible inside the hold, some sitting on the floor and others standing. A bright light source, possibly a flashlight or a powerful lamp, is positioned in the upper left corner, casting a strong beam of light across the scene. The overall atmosphere is dim and somber.

The Worldwide port industry continues to kill people in ships' holds

A sector lagging behind

- The bulk freight sector is lagging behind other sectors such as container and palletisation
- Port ship discharge industry has not had the same safety improvements as construction or quarrying
 - Leaving us to rely on our own industry bodies and associations

What is wrong with the current method?





Ship trimming – an afterthought



- Spiral ladder blocked with heavy deposits of cargo.
- The manual trimmer has to make a safe passage past this to gain access to the hold.

Ship trimming – an afterthought



This manual trimmer has dislodged the cargo with a long-handled scraper, due to the properties of gravity the cargo falls towards the pedestrian operative

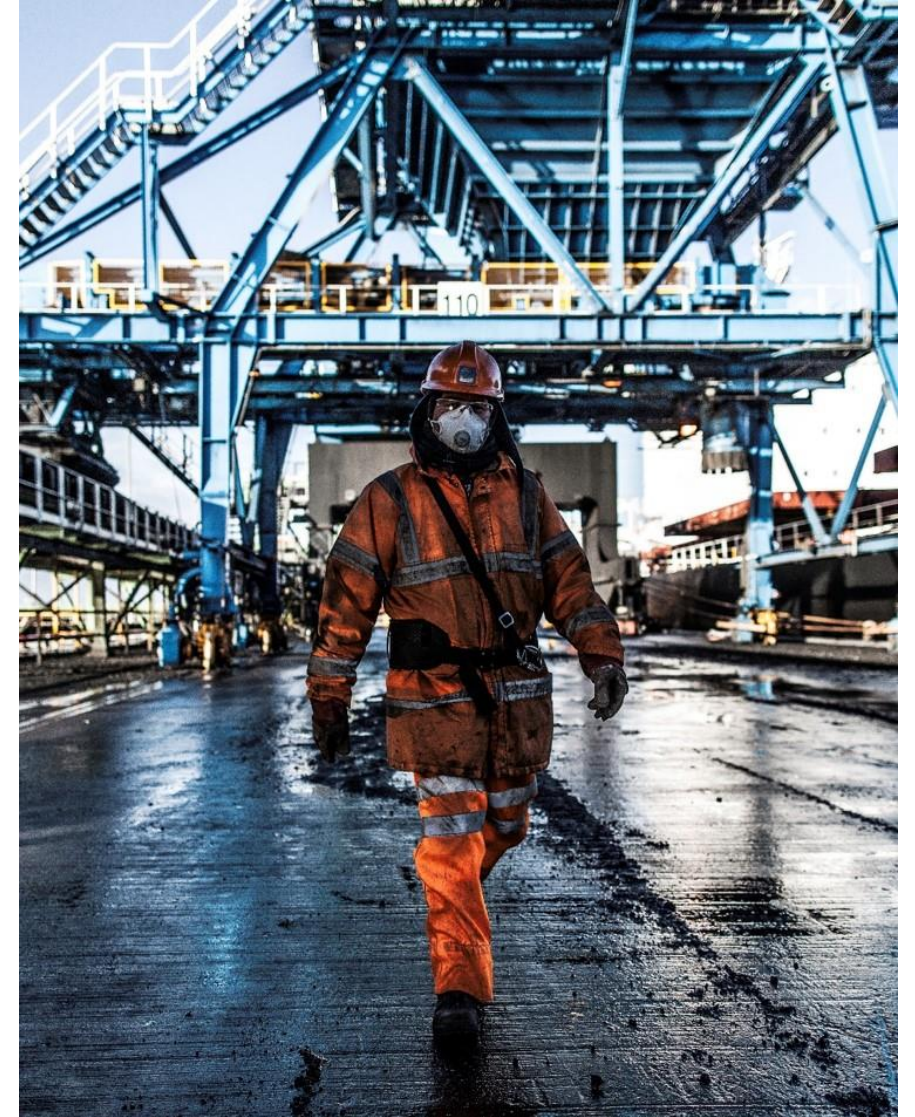
Why do we use excavators?

- Safe haven for workers
- Self stabilising
- Balanced
- Less movement
- Improved productivity



Removing manual workers from high risk areas

- Manual workers are now removed from poor working activities
- We now look after their health and safety
- This can lead to further barriers to safe working





- Pipe protection holding cargo, current practise is to dislodge this with a long-handled scraper.

- Heavy deposits of cargo in vertical ladder run and platform. Manual trimmers are expected to make their way past this obstruction to gain access into the hold.
- During ship discharge the condition of the ladders does not become evident until the cargo is removed.
- With the manual trimmer having to climb down and kick out the cargo from the ladder they cannot see until the cargo is cleared.



Danger points?

- Every time a pedestrian enters the hold there is a risk of
 - Falls from height
 - Movement of cargo
 - Crushing / entrapment / burying
- Every time a pedestrian enters the hold the ship discharge operations must cease

How can
this be
further
improved
on?



A revolutionary solution for the
dislodging of dry bulk dry cargo

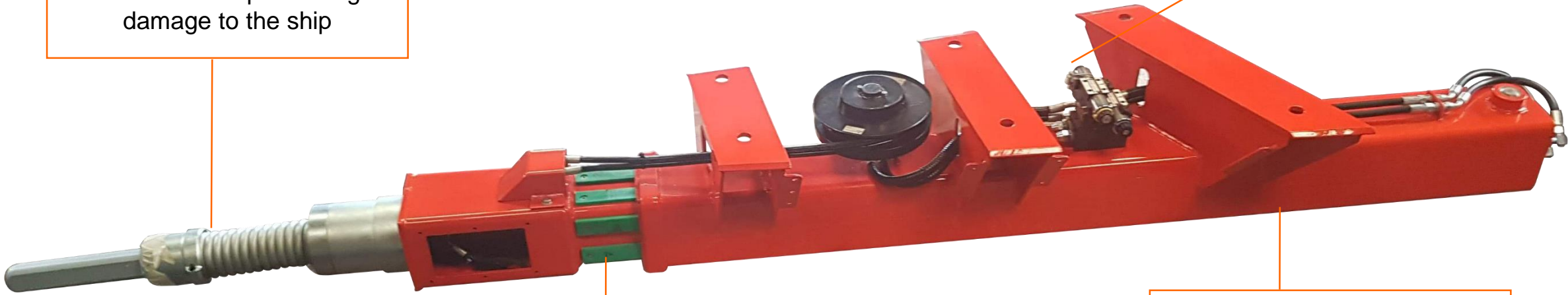
DB1 VIBROTRIM

Spring allows vibration and the tool to deflect preventing damage to the ship

Vibrotrim can be retracted when not in use

Extending section containing hydraulic arm

External body is fixed to the excavator arm







What can it be used for?

- Any cargo that 'hangs up'
 - Soya, PKE, Animal Feed, Human foods, Proteins, Ores, Coal, Pet-coke, PFA, cement
- Any ship with
 - ribs, bulkheads, ledges, ladders
 - Narrow hatch openings
- Can be mounted on a hydraulic arm or Hiab
 - To clear screens and conveyors
- Hoppers and silos
 - To clear bridging
- Bulk storage
 - Where products adhere to side

SAFETY

- ✓ Removes need for pedestrian workers in hold
- ✓ Improved safety in the hold as operator in safe haven of cab
- ✓ Reduced damage to ship infrastructure

PRODUCTIVITY

- ✓ Reduce manual labour costs
- ✓ Reduced Crane / CSU downtime
- ✓ No additional lifts