



ACCIDENT ALERT

Serious port accident—worker struck by steel band

The accident

A steel strapping band, under tension, broke and struck a worker in the face causing serious injury. The report of the Ministry of Transport is summarised below.

The set up

Half-height flat racks stowed with bales of pulp were being stowed in the forward port corner of No. 3 tween deck.

The gang was made up of four men:

- a crane driver;
- a signaller; and
- two general hands.

All men were wearing safety helmets, safety boots, overalls and gloves.

The flat racks were being stowed in direct line of sight of the crane driver and the signaller had positioned himself in the tween deck where he was in view of the crane driver. Usually the signaller is on deck, but this gave him a better view of the cargo for positioning in the stow. The general hands were positioning the cargo and releasing twist locks from the flat racks.

After a 20 foot flat rack loaded with pulp and having a total weight of 20.4 tonnes had been stowed, a similar unit was to be placed next to it as shown in the diagram. The flat racks were to be end to end, and were part of a consignment of 12 similar units. One general hand and the signaller were standing on top of the first unit. The second unit was landed and then floated to bring it into position.

What happened next

As the load floated, it swung towards the end of the unit on which the men were standing, and broke the steel band securing the pulp to the flat rack. The band was under tension and sprung back between the two men. The steel band hit the general hand in the face, causing serious injury.

A ship's officer on deck immediately called for assistance, and the general hand was attended by a first aider until the ambulance arrived. It was estimated that about 8 minutes lapsed between the incident and the arrival of the ambulance. He was taken to hospital where he made a good recovery, but he will lose the sight of one eye. He has been employed as a waterside worker for about 20 years.

Inspector's findings

The strapping band was type 31780 (31.7 mm x 0.80 mm). The bands have minimum breaking strain of 22.8 KN with typical breaking strain of 24.1 KN. Straps are fitted transversely over the pulp, and one strap is fitted longitudinally. The bands are tensioned by hand-operated ratchets by the exporting company and fitted with two crimp seals. The incident was caused when the band under tension was struck by a flat rack, breaking the band. This method of securing bales of pulp to flat racks has been in use for about 17 years.

Bands are used for securing steel and timber cargoes as well as pulp.

Although bands are quite often broken by contact with forklift tynes and with other cargo, there have apparently been no problems and the bands have not been recognised as a danger. A relatively large amount of potential energy is stored in the longitudinal band fitted to pulp on flat racks, due to compression and the length of band, which is about 10 metres. It is therefore considered that these bands under tension are a greater hazard than the shorter transverse bands, or bands fitted to steel cargoes.

Inspector's conclusions

1. The accident was not caused by any breach of the General Harbour Regulations.
2. The potential danger of strapping bands under tension was not recognised before this accident, and no fault can be attributed to the employer.

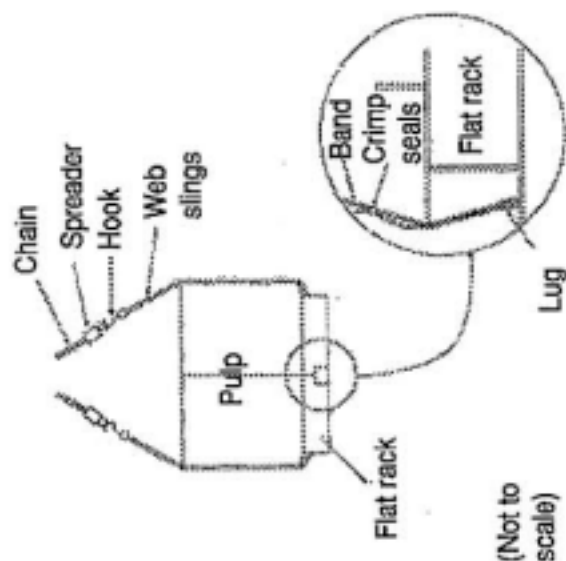
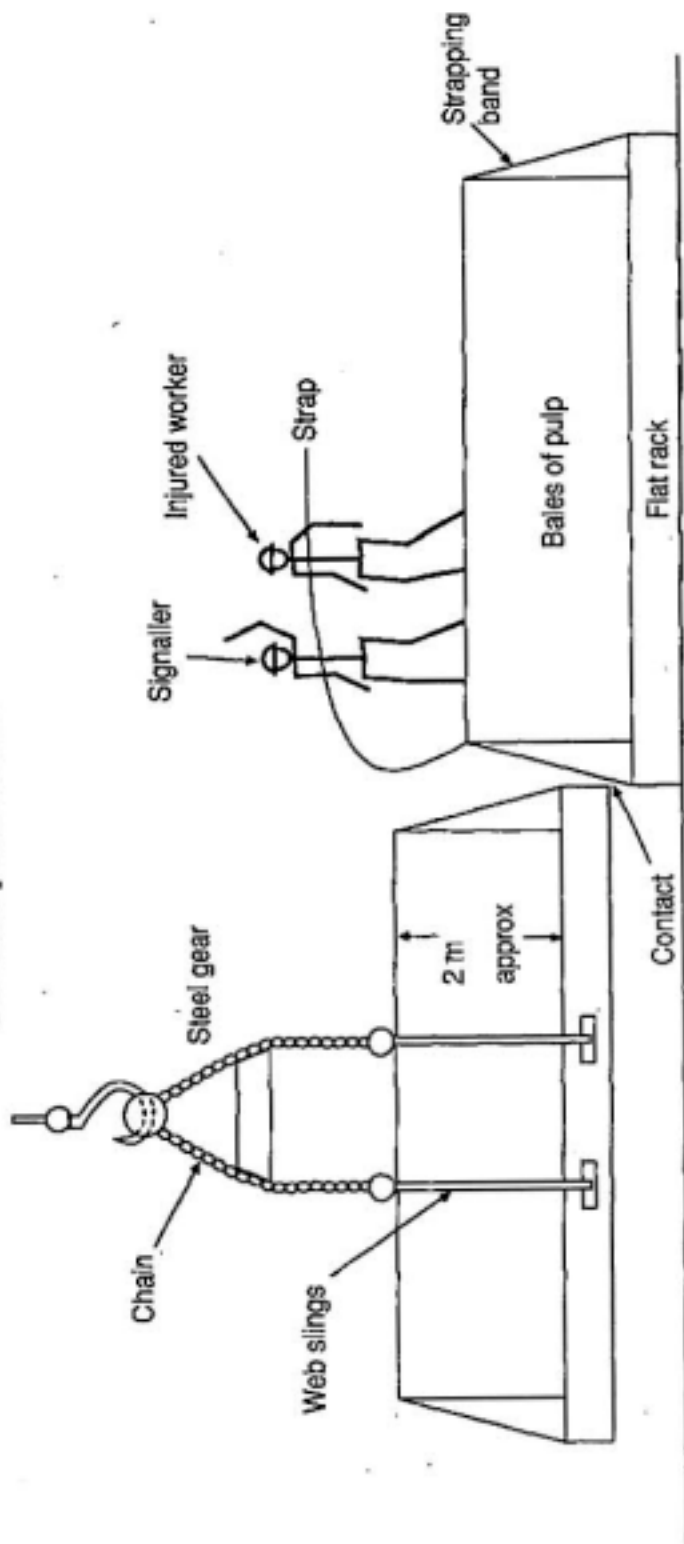
Inspector's recommendations

Employers and workers need to be aware of the potential danger from strapping bands that are under tension. Workers should stand clear when there is risk of contact between the bands and other cargo or equipment.

Action taken by OSH

OSH is liaising with industry to see whether better procedures for strapping the product to the base are available or can be devised.

Serious port accident



(Not to scale)

