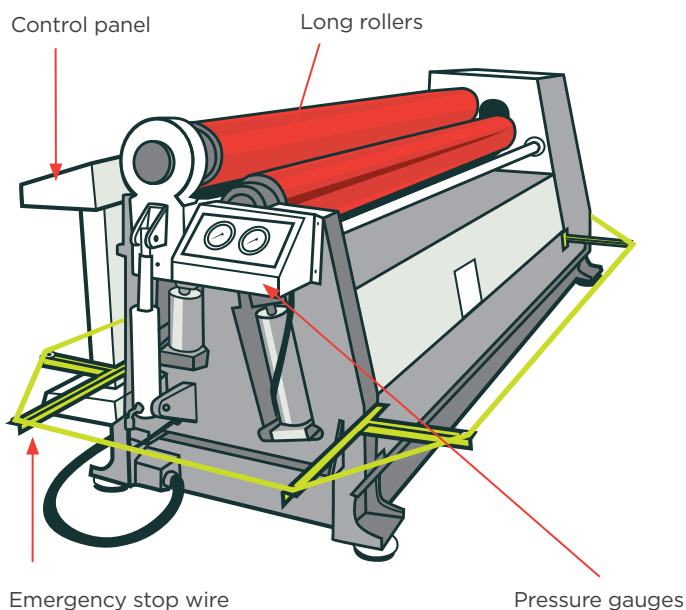


## FACT SHEET

# THREE ROLL BENDING MACHINES

Three roll bending machines roll sheet metal to form curves. When sheet metal is placed manually between the rollers, which must turn to secure the metal sheet, fixed or interlocked guards are impracticable. Plate metal thicker than approximately 6 mm will be placed by crane to prevent the operator getting too close to the rollers, and reduce the risk of manual handling injuries.

FIGURE 1: THREE ROLL BENDING MACHINES



### HAZARDS:

- > Trapping between rollers & metal
- > Trapping between turning rollers
- > Contact with sharp edges of metal
- > Noise
- > Slips, trips & falls
- > Entanglement from unexpected movement (during maintenance, cleaning & repairs)

### PPE:

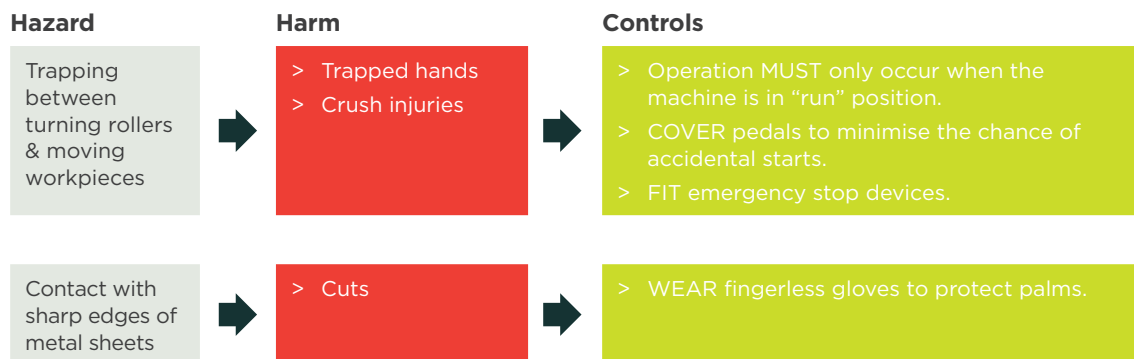


### TASK - FEED SHEET METAL THROUGH THE ROLLERS

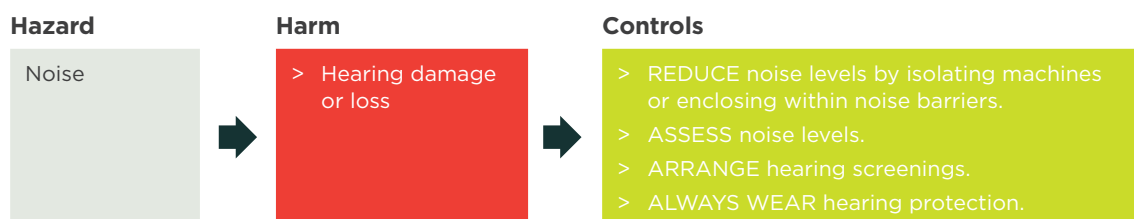
Hazard	Harm	Controls
Trapping between rollers & metal	<ul style="list-style-type: none"> <li>&gt; Trapped hands and fingers</li> <li>&gt; Crush injuries</li> </ul>	<ul style="list-style-type: none"> <li>&gt; ENSURE safety devices are in place, such as an emergency stop wire or kick plate.</li> <li>&gt; ENSURE kick panels have a switch at each end.</li> <li>&gt; FIT emergency stop devices on both sides of the machine.</li> <li>&gt; HOLD workpieces back from the edge of the metal, allowing metal to be fed into rollers without contact.</li> <li>&gt; ONLY WEAR gloves if they are fingerless.</li> </ul>

Sheet metal is usually placed by hand between the rollers, which turn together to pull the sheet through. As it passes between the rollers, the sheet curves to a diameter limited by the size of the rollers. The action that draws in a metal sheet can also draw in a hand. Finger ends of gloves can become entangled and draw fingers and hands into nips.

## TASK – LOAD & UNLOAD



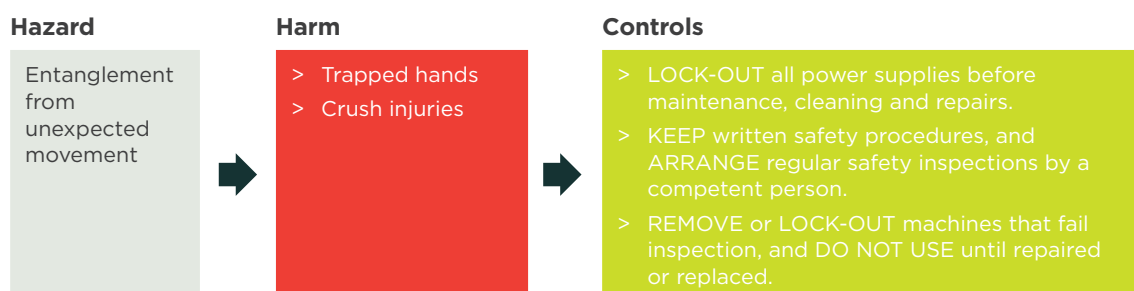
## OTHER (NON-MECHANICAL) HAZARDS



A safe noise level over an eight hour day is 85dB(A). A three roll bending machine may exceed this noise intensity.



## TASK – MAINTENANCE, CLEANING & REPAIRS



References, current standards and further information can be found on the Safe Use of Machinery project page at: [www.worksafe.govt.nz](http://www.worksafe.govt.nz)

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