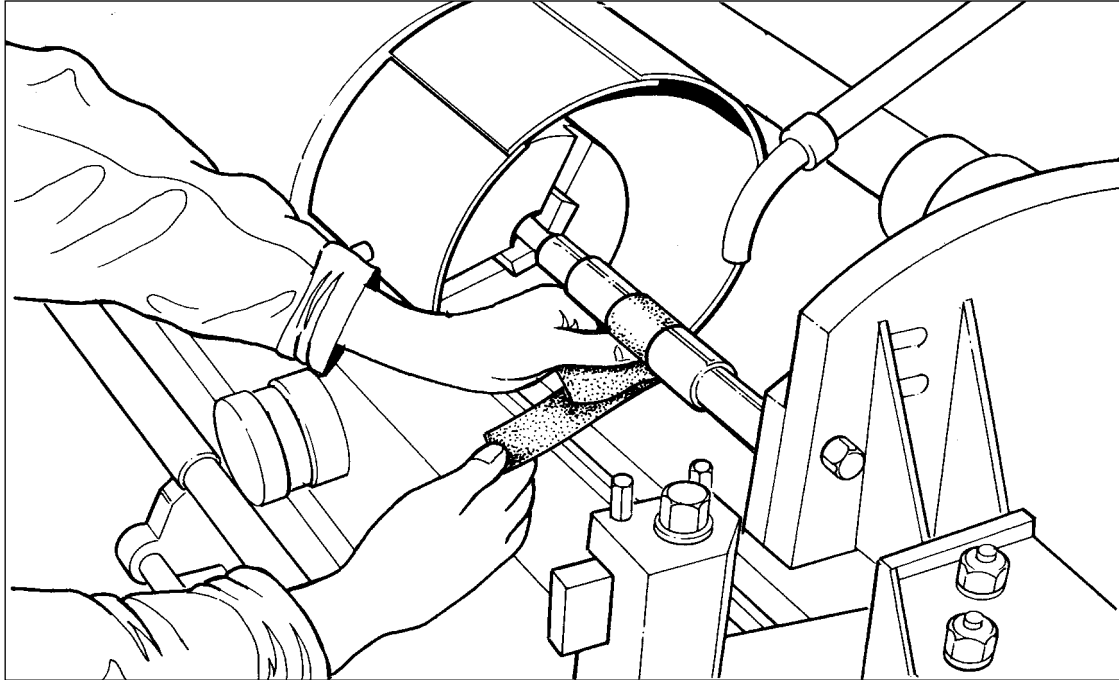




# Accidents at metalworking lathes using emery cloth

## Engineering Information Sheet No 2

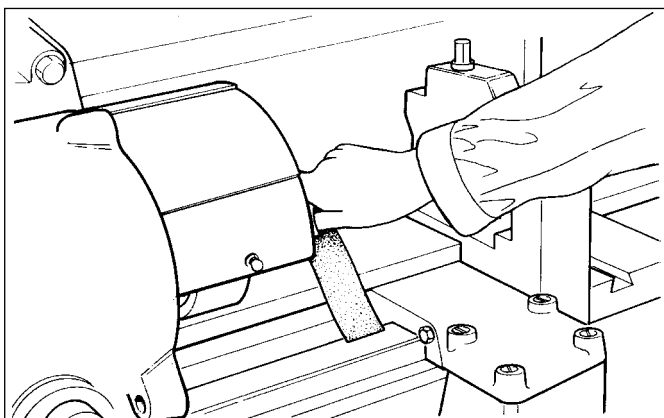


Danger: Even with long strips of cloth there is a danger of trapping as illustrated here

### Hazards

A high proportion of all accidents at metalworking lathes involve the use of emery cloth and result in injuries such as broken and, occasionally, amputated fingers.

Emery cloth is used to deburr, polish or size a wide range of cylindrical, tapered and threaded metal components while they are rotating in lathes.



Danger: Emery cloth should never be held loose in the hand

Most accidents happen when each end of a strip of emery cloth is held in separate hands and passed around the back of the component being finished. If the cloth is wrapped around the fingers and/or becomes snagged on the component while it is tightly gripped, then a serious injury is the likely result.

### Precautions

Emery cloth should NEVER be used at NC lathes. Employers should assess the need to use emery cloth on components rotating in a lathe. Such operations may not be necessary if:

- the finish being sought is only cosmetic. For such finishes the component may be held in one hand and polished by emery cloth held in the other. Alternatively a finishing belt or machine may be used;
- a sizing operation can be successfully performed either by turning or by further operations in a dedicated polishing, finishing or grinding machine.

If the required tolerance is only achievable by the use of emery cloth against rotating components, then the emery cloth should be applied using either:

- (a) backing board of good quality wood; or
- (b) a tool post onto which the emery cloth may be placed; or
- (c) a 'nutcracker' consisting of two backing boards which are lined with emery cloth and joined at one end and shaped so that they may encompass the surface to be finished; or
- (d) hand-held, abrasive-impregnated wire brushes.

Where none of the above methods is reasonably practicable and it is necessary to use emery cloth for polishing the outside diameters of components, the emery cloth should be used in long strips with one end passed beneath the component. Force should be applied by pulling both ends of the cloth upwards, never allowing the cloth to go slack or to wrap around either the operator's finger or the components.

For polishing the ends of components, only very short lengths or pads of cloth, which are incapable of causing entanglements, should be used. Overall sleeves should be tight-fitting and gloves should never be worn.

**Useful reading**

*Health and safety in engineering workshops* HSG129 (Second edition) HSE Books 1999 ISBN 0 7176 1717 3

**Further information**

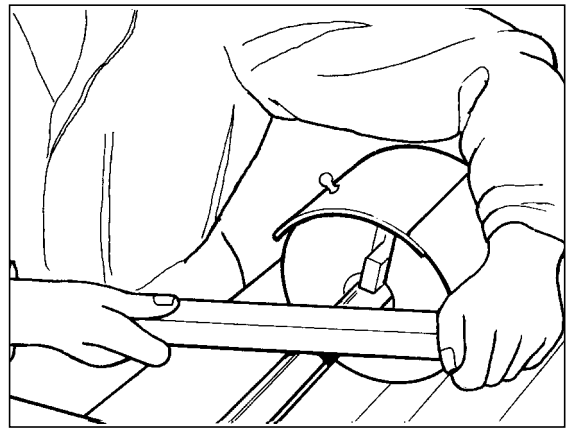
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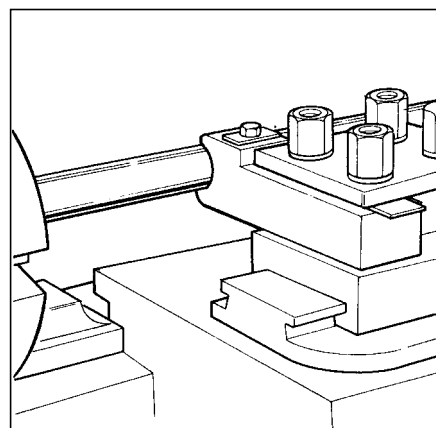
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This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

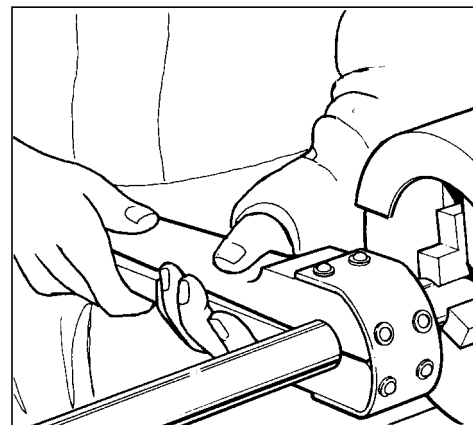
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Good practice: Sticks used in this way must be strong and of good material



Good practice: The use of a tool post completely removes all risk of injury to the hands



Good practice: Using the 'nutcracker' method - a much better way of polishing