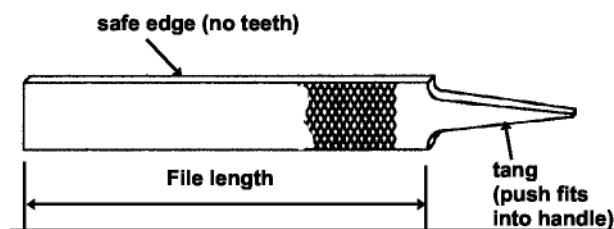
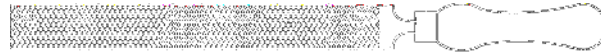


Design & Manufacture

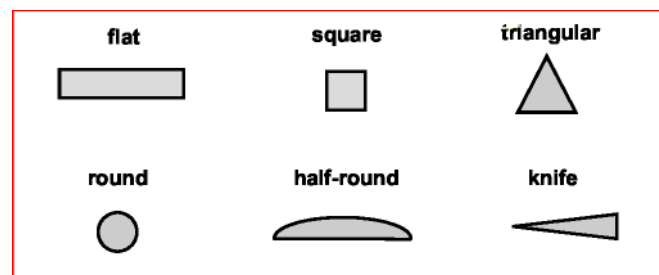
Homework 42

Filing Metal

Files are used for removing small amounts of metal and for smoothing a surface after it has been sawn. They are made from **High Carbon Steel** and come in many shapes, sizes and grades of cut.



The most common files are named after their cross-section.



The roughness of a file is known by its **cut**.

Bastard Cut

Used first to get rid of most of the waste quickly. Leaves a rough finish.

Second Cut

Used to file closer to the line and for general work. Leaves a reasonably smooth finish.

Smooth & Dead Smooth Cut

Used to file to the line and to provide a smooth finish.

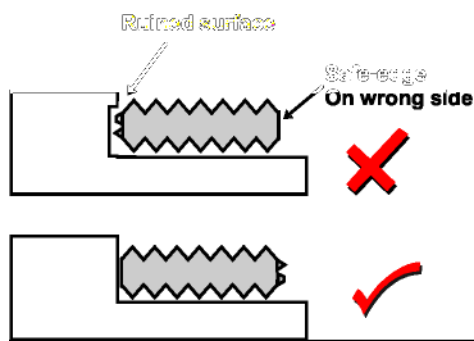
Needle files (Swiss files)

These are small, dead smooth cut versions of normal files, cast with solid handles. They are used for fine work.

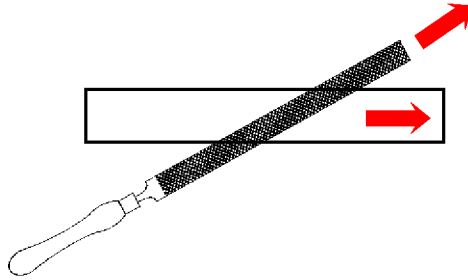


Safe-edge Files

Some flat files have a safe-edge. The safe-edge is useful to use when filing into a corner. It stops the file from filing into the other surface.

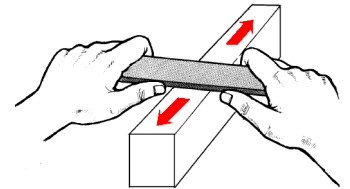


When filing a long edge, push the file forwards and slide it sideways at the same time.



Drawfiling

Drawfiling is using the file sideways to give a very smooth finish to an edge.



Safety Note: Never use a file without a handle, or with a loose handle, because the tang is likely to go into your hand when you push the file forwards.

Questions

1. What is the purpose of a file's tang?

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2. Draw the cross-sections of **six** of the most common types of file.

4. Illustrate the use of the safe-edge of a file.

5. How can a narrow file be made to smooth a large surface?

6. Name and illustrate the filing method that gives the smoothest finish.