

# Typical TTE Mechanical Hand Tools Recognition & Uses



Name the tool



Centre Punch – What is the angle of the tip?

90° - What is it used for?

To produce a dimple in the material to assist drilling , so the drill does not skid on the surface, thus producing an accurately placed hole.

What is it made from?

High carbon steel (HCS) which is hardened & tempered

# Name the tool



Dot Punch – What is the angle of the tip?

120° - What is it used for?

To proof punch, to assist marking out by producing “dots” along the marked lines for clarity.

What is it made from?

High carbon steel (HCS) which is hardened & tempered

# Name the tool



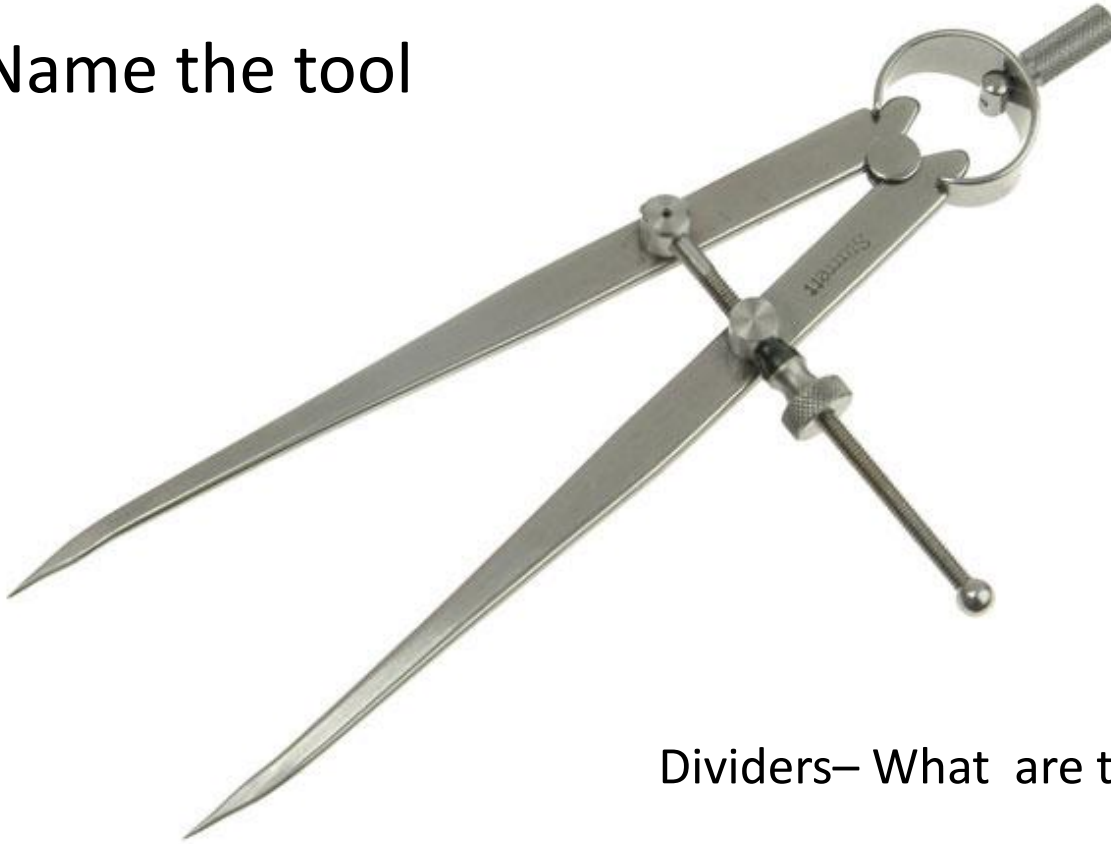
Scriber– What is it used for?

Marking out – scribing lines and features on metals.

What is it made from?

High carbon steel (HCS) which is hardened & tempered

Name the tool



Dividers– What are they used for?

Marking out – Circles & Arcs on metals.

What is it made from?

High carbon steel (HCS) which is hardened & tempered

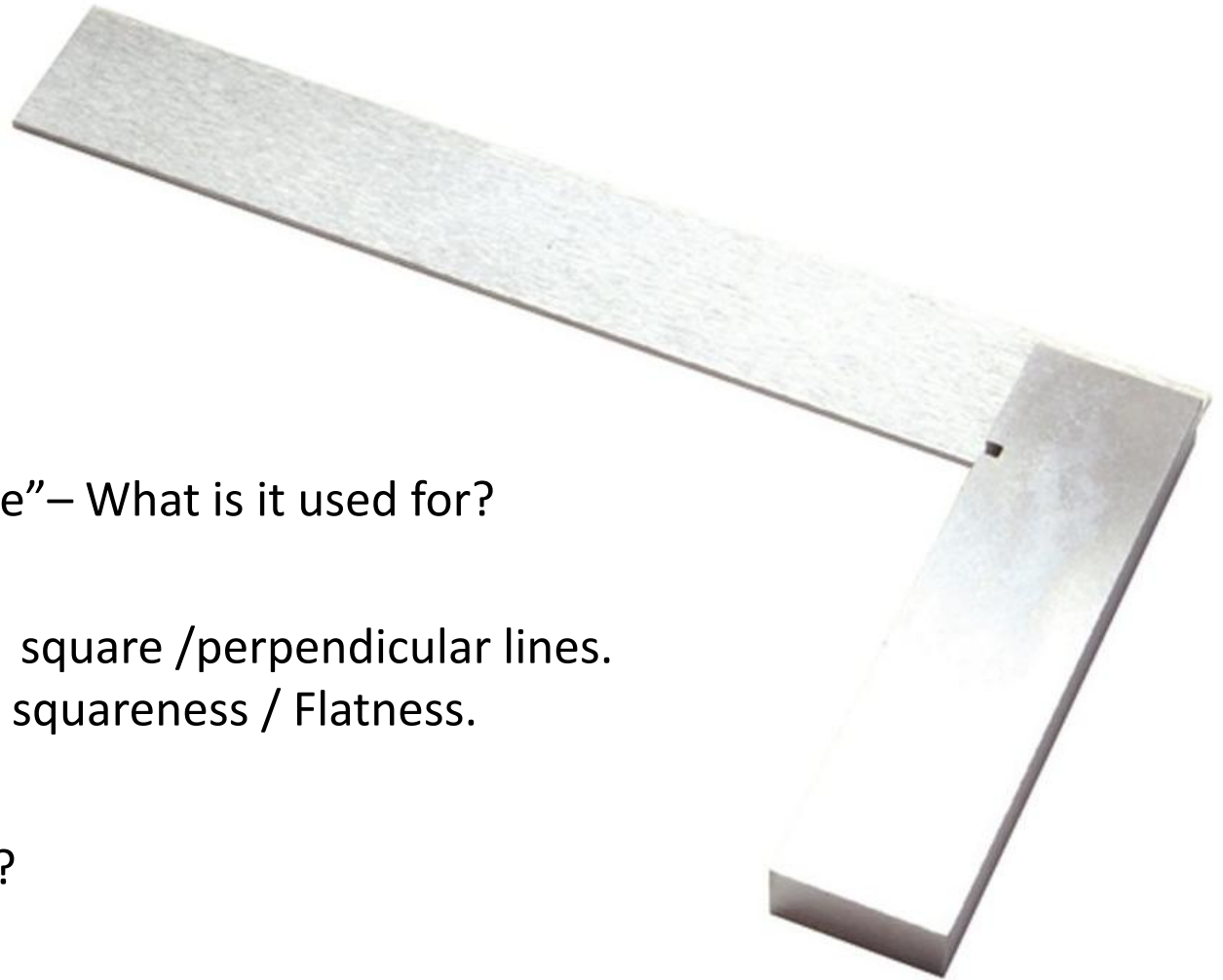
# Name the tool

Engineers “Try Square”– What is it used for?

Marking out square /perpendicular lines.  
Checking for squareness / Flatness.

What is it made from?

The “Body” is usually made from mild steel and the  
“Blade” being High carbon steel (HCS) which is  
hardened & tempered



Name the tool



Hand Taps – Set of 3  
What are they used for?

Producing an internal screw thread.

What are they made from?

“HSS” High speed steel and are very hard.

Name the 3 taps which constitute a set?

Taper. Second or Intermediate. Plug or Bottoming.

# Name the tool



Tap Wrench -

What is it used for?

Holding a tap or a hand reamer, and being able to provide rotary leverage to “Tap” or “Ream” a hole.

What is it made from?

The “Body” is usually made from mild steel and the “Jaws” being High carbon steel (HCS) which is hardened & tempered



# Name the tool



Split Die -What is it used for?

To produce an external screw thread

What is it made from?

“HSS” High speed steel and are very hard.

# Name the tool



Die Stock -What is it used for?

Hold a split die and being able to provide rotary leverage to be able to produce an external thread

What is it made from?

It is usually made from mild steel.

# Name the tool



Hand File-What is it used for?

Cutting & shaping materials usually metals

What is it made from?

The “Handle” is usually made from wood with a steel ring called a “Ferrule”.  
The file is High carbon steel (HCS) which is hardened & tempered but the end  
“Tang” which goes into the handle is left soft – Why?

So it does not break when under pressure  
from the forces exerted by the operator

# Name the tool

Needle Files-What are they used for?

Precision cutting & shaping materials  
usually metals

What are they made from?



They are made from High carbon steel (HCS) which is hardened & tempered but the end “hand grip” is left soft – Why?

So it does not break when under pressure from the forces exerted by the operator

# Name the tool



Ball Pein Hammer-What is it used for?

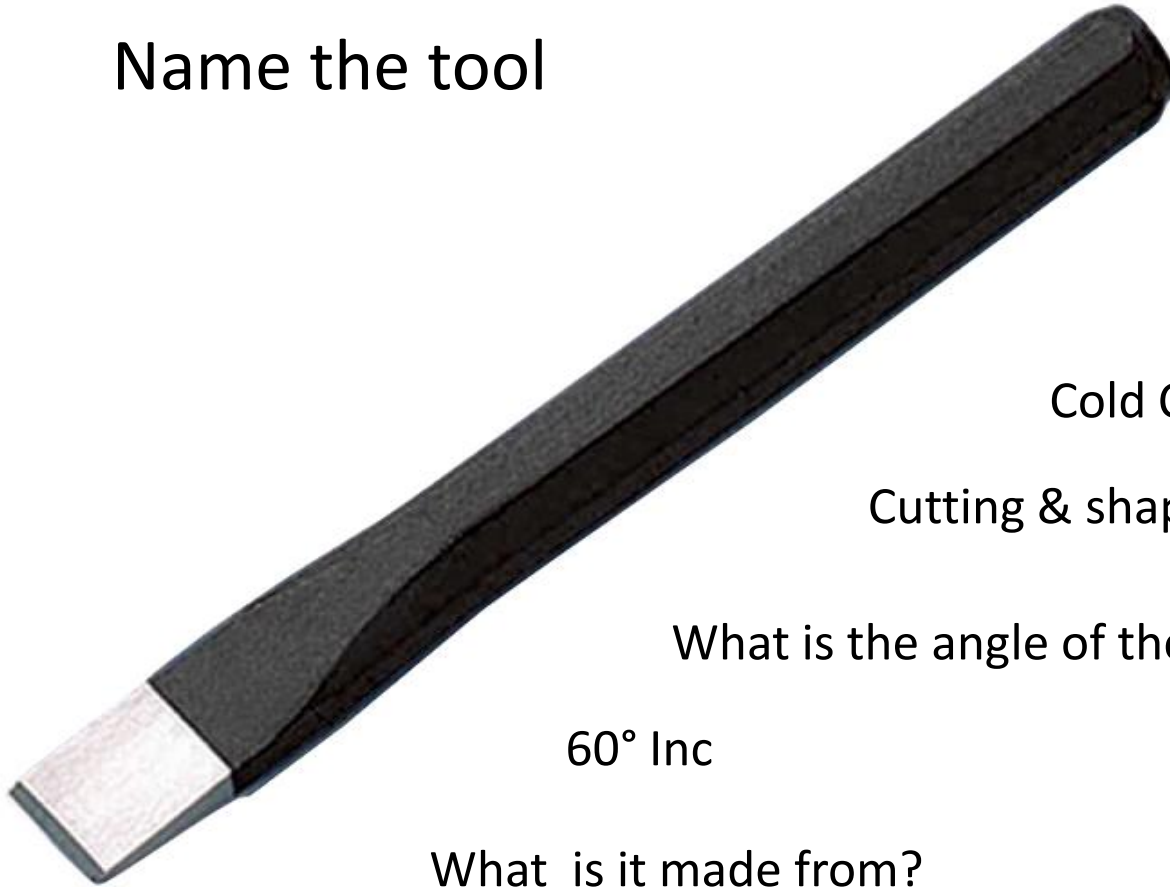
Shaping materials , punching, chiselling, dismantling, riveting and many more applications.

What is it made from?

The handle is usually made from Wood –  
What type of wood?  
Traditionally “Hickory”

The head made from High carbon steel (HCS)  
which is hardened & tempered.

Name the tool



Cold Chisel – What is it used for?

Cutting & shaping materials usually metals.

What is the angle of the cutting edge?

60° Inc

What is it made from?

It is made from High carbon steel (HCS) which is hardened & tempered at the cutting edge, but the end is left soft – Why?

So that it can absorb the hammer blows without shattering.

Name the tool



Hacksaw – What is it used for?

Cutting & shaping materials usually metals.

What is it made from?

The body is made from Cast Steel. The interchangeable blade can be made from High carbon steel (HCS) which is hardened & tempered. But for the best performance (HSS) High speed steel is used.

# Name the tool



Junior Hacksaw – What is it used for?

Cutting & shaping materials usually metals.

What is it made from?

The body is made from Mild Steel. The interchangeable blade can be made from High carbon steel (HCS) which is hardened & tempered. But for the best performance (HSS) High speed steel is used.



# Name the tool

Tin Snips – What is it used for?



Cutting & shaping sheet metals & Alloys.

What is it made from?

Body is made of drop forged chromium vanadium steel. The blades are induction hardened.

# Name the tool



Spanners— What are they used for?

Fixing and removing hexagonal fasteners or specific types of fasteners.

What are they made from?

They are made from drop forged chromium vanadium steel.

# Name the tool



Flogging Spanner– What is it used for?

Fixing and removing very large hexagonal fasteners

What is it made from?

They are made from drop forged chromium vanadium steel.

# Name the tool

G- Clamp – What is it used for?

They are an essential tool in the workshop and they come in a range of sizes and are generally used for clamping work securely to a surface/workbench top. They can also be used to hold parts together for example items to be welded.

What is it made from?

The thread of a G Cramp is made from hardened and tempered steel which means it is quite resistant to wear. The frame is normally made from drop-forged steel.



# Name the tool



Vice "Mole" Grips– What is it used for?

Gripping and holding parts- for example items to be welded or drilled. They are a very useful to have.

What is it made from?

They are made from drop forged chromium vanadium steel.

Name the tool



Pipe “Stilson” Wrench– What is it used for?

For turning / tightening / adjusting soft iron pipes and fittings.

What is it made from?

It is made from drop forged chromium vanadium steel.

# Name the tool



Screwdrivers—  
What are they used for?

Adjusting tools & machinery, Assembling  
/de -assembling electrical and mechanical  
devices.

What are they made from?

The blade is usually made (HCS) hardened and tempered or sometimes chromium vanadium steel and induction hardened. The handles are made from various materials such as – Plastics, Woods, Metals.



# Name the tool

Pliers – What are they used for?

They are designed to be used for a combination of tasks including cutting wire, twisting wire, forming , griping – and many more applications

What are they made from?

The blade/ jaws are usually made (HCS) hardened and tempered or sometimes chromium vanadium steel and induction hardened. The handles are made from various insulating materials such as rubber.





Name the tool



Cable “Jokari” Knife– What is it used for?

They are designed to be used for a stripping wire.

What is it made from?

The blade is usually made (HCS) hardened and tempered. The handles are made from various insulating materials such as plastics.