

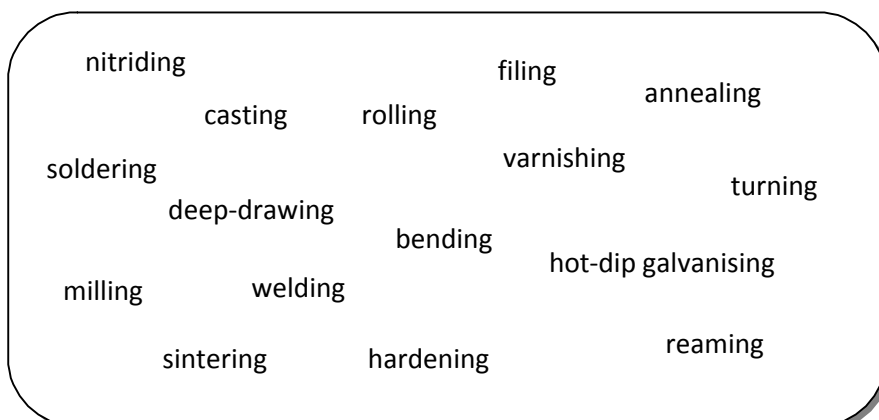
Manufacturing processes in the metalworking industry

Manufacturing processes are processes in which solid geometrical bodies are produced from *feedstock*¹. These bodies may be produced either manually or by machine.

During the manufacturing process, the shape of the workpiece can be created, changed or *retained*².

All manufacturing processes can be organised into six main categories which may be further *subdivided*³. The manufacturing processes contained in each group all share the same basic characteristics. Group 1, "Primary Shaping", consists of all the manufacturing processes which create particle *cohesion*⁴. Group 2, "Forming", contains the processes in which cohesion of particles is retained. Group 3 is entitled "Machining and Cutting". Manufacturing processes in this group cause a reduction in particle cohesion. Group 4, "Joining and Fastening", and group 5, "Coating", both consist of manufacturing processes which increase particle cohesion. Lastly, the manufacturing processes in group 6, "Material Property Changes", are all characterised by a simultaneous *retention*⁵, reduction and increase in particle cohesion.

In the box below, you can see examples of various manufacturing processes. Look up any new words in a dictionary or in your Metal Trades Handbook and add the German equivalents to the wordlist on the right-hand side of the page. Then match each of the manufacturing processes to one of the six main groups, using the chart provided on the following page. You may add more examples.



¹ feedstock –
Ausgangsmaterial

² retained –
beibehalten
(verb: to retain)

³ be subdivided –
unterteilt werden
(verb: to subdivide)

⁴ cohesion –
der Zusammenhalt

⁵ retention –
die Beibehaltung

annealing –
bending –
casting –
deep-drawing –
filing –
hardening –
hot-dip
galvanizing –
milling –
nitriding –
reaming –
rolling –
sintering –
soldering –
turning –
varnishing –
welding –

Manufacturing processes

Group	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Name of the group
Common basic characteristics of the group
Examples of manufacturing processes
Explanatory facts



Fertigungsverfahren

Gruppe Nr.	Gruppe 1	Gruppe 2	Gruppe 3	Gruppe 4	Gruppe 5	Gruppe 6
Name der Gruppe
Gemeinsames Merkmal aller Verfahren in der Hauptgruppe
Beispiele für Verfahren in der Hauptgruppe
Fakten, Erklärungen

