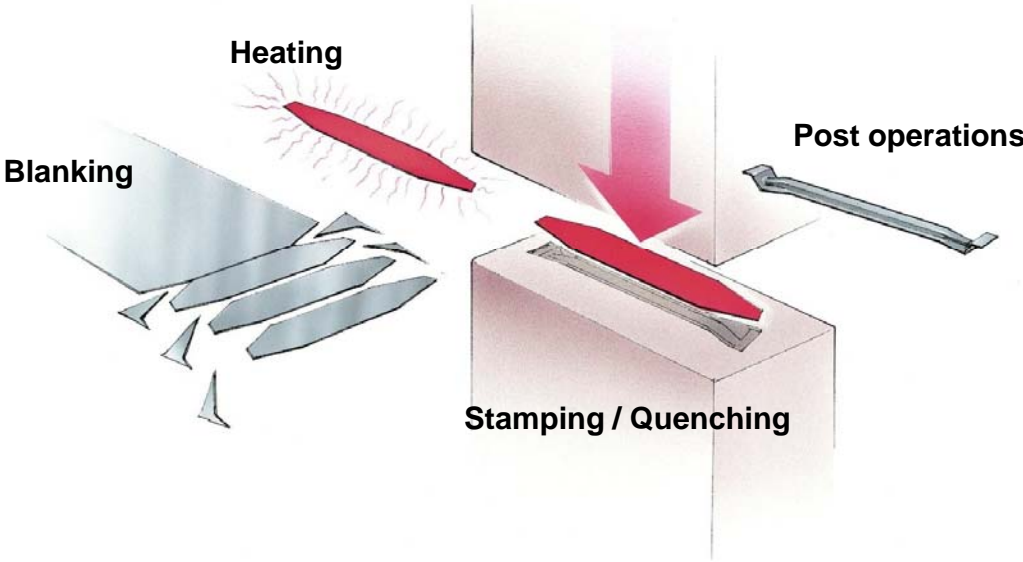




Gestamp 

Daniel L. Fox



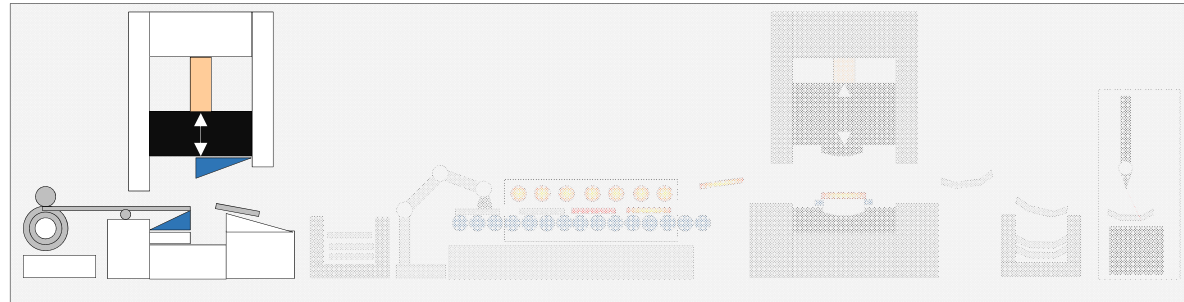
Basic Process

Blanking

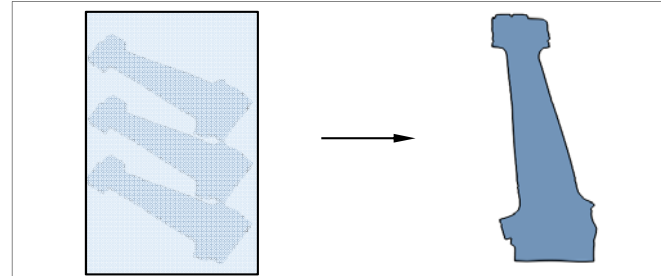
Heating

Stamping / Quenching

Post operations



- Blank is cut out from steel coil
- Steel coil tensile strength at 20°C is around 500 MPa
- Suppliers:
Arcelor
Nippon steel
Baosteel

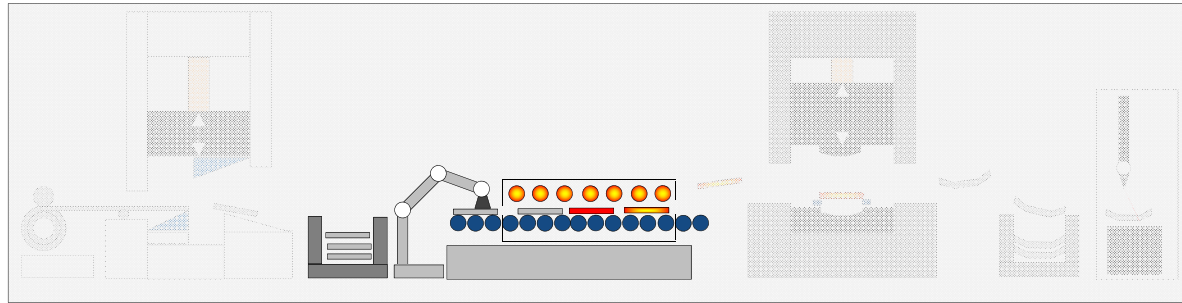


Blanking

Heating

Stamping /
Quenching

Post
operations



- Blank is heated up to ~930°C
- An austenitic structure is created inside the material.

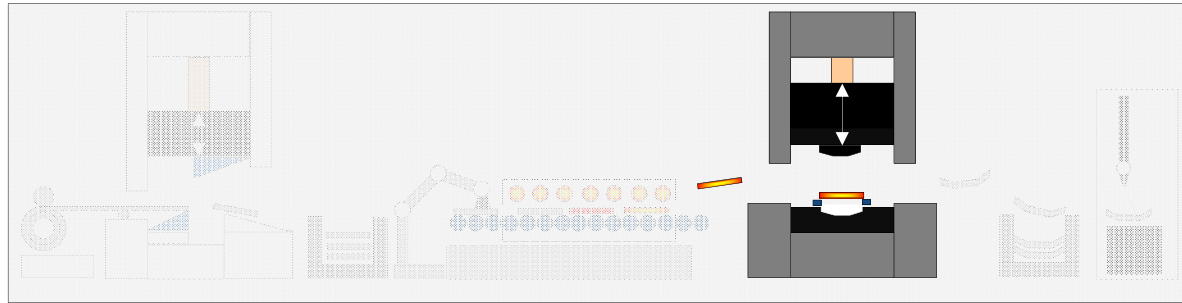


Blanking

Heating

**Stamping /
Quenching**

Post
operations



- Blank is stamped while it is hot
- After stamping the blank is cooled rapidly ($\sim 50^{\circ}\text{C/s}$)
- Quenching creates a martensitic structure

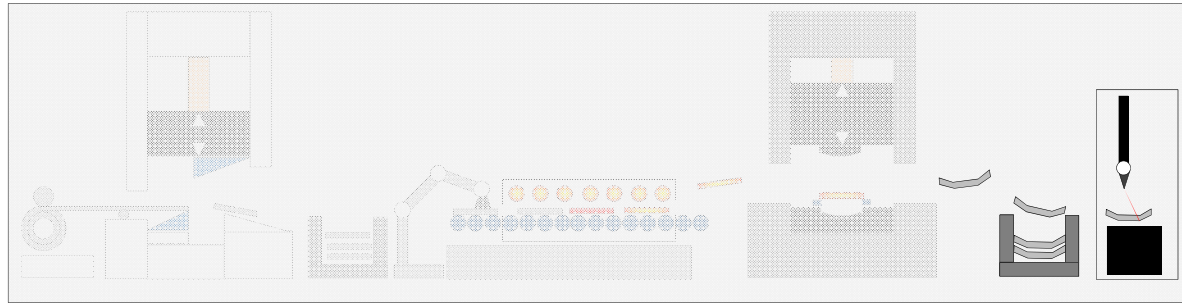


Blanking

Heating

Stamping /
Quenching

**Post
operations**



- Laser cutting
- Post punching
- Shot blasting

