



# Flame Hardening

## Typical Applications

GEAR TEETH ● SPROCKET TEETH ● ROLLING SURFACES ON WHEELS ● BEARING SURFACES ON SHAFTS

Flame hardening is a process used to heat treat steel in localized areas, in which a thin surface shell of a steel part is heated rapidly to a temperature above the critical point of the steel. After the grain structure of the shell has become austenitic, the part is quickly quenched, transforming the austenite to martensite while leaving the core of the part in its original state. One of the major advantages of flame hardening is the ability to satisfy stringent engineering requirements with carbon steels.

### Benefits

- Increased wear resistance
- Soft Bores for finish machining
- Less distortion
- Ability to achieve high hardness with medium carbon steels

### Industries

- Heavy Equipment
- Transportation
- Industrial
- Manufacturing

