



Group 9
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Jominy test

- **Jominy test**

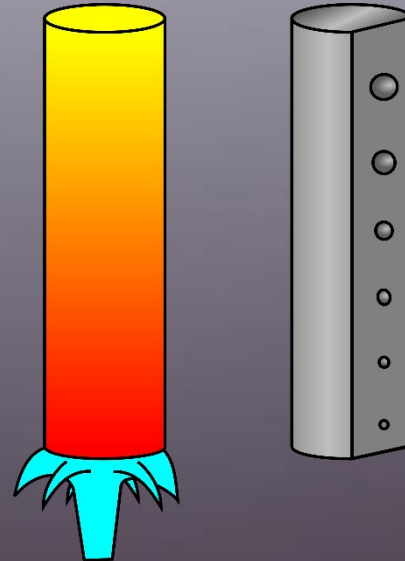
(is used to measure the hardenability of a steel)

- **Hardenability**

(ability of material to subside into martensite)

- **Hardness**

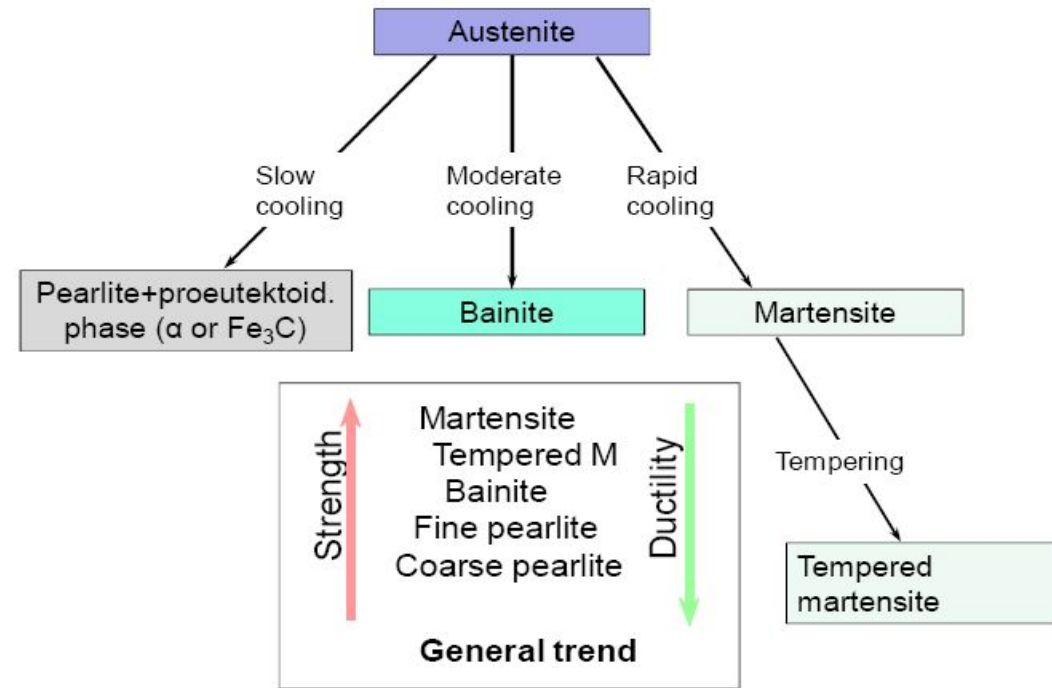
(is a measure of how resistant solid matter is to various kinds of permanent shape change when a compressive force is applied.)



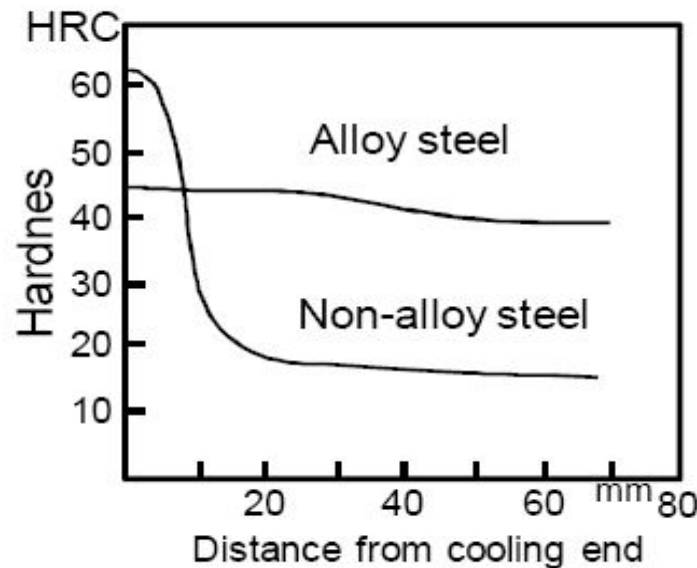
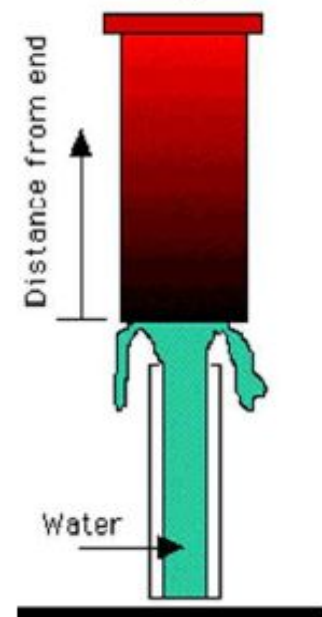


- Alloy vs Non-alloy
- Cooling end
- Martensite
- Properties
- Microstructural constituents

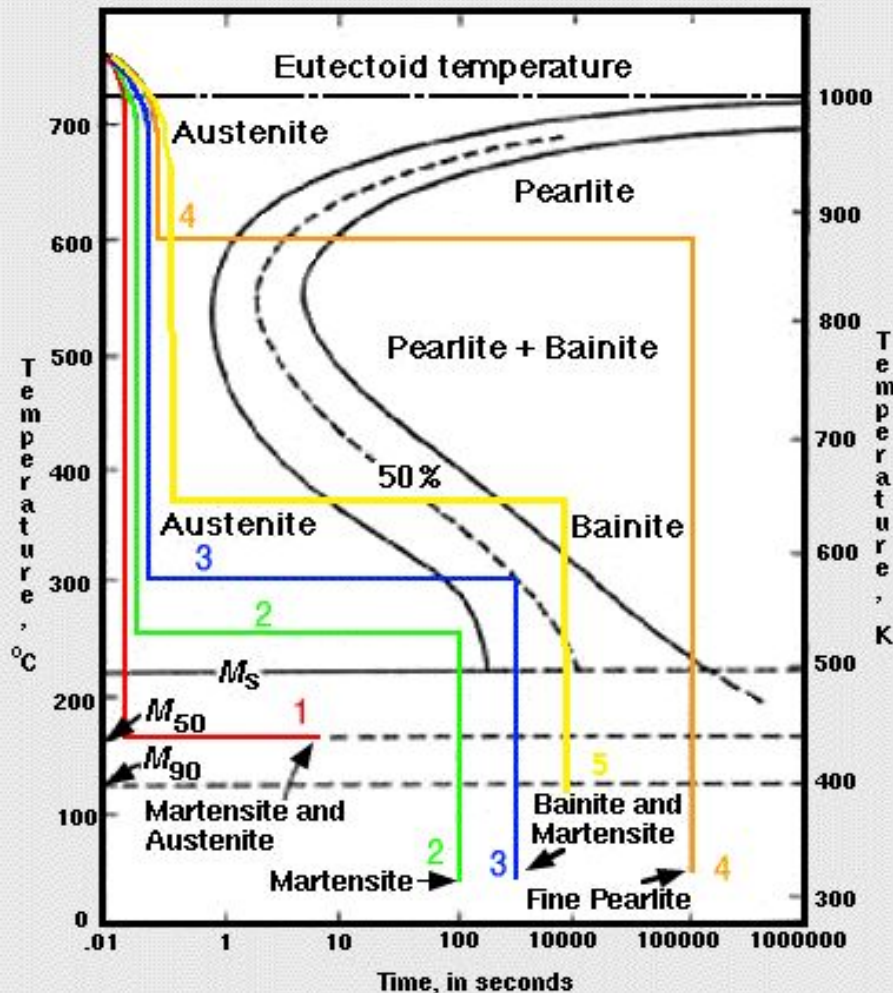
Possible transformations



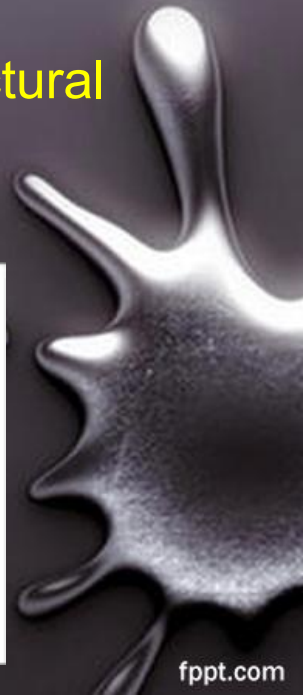
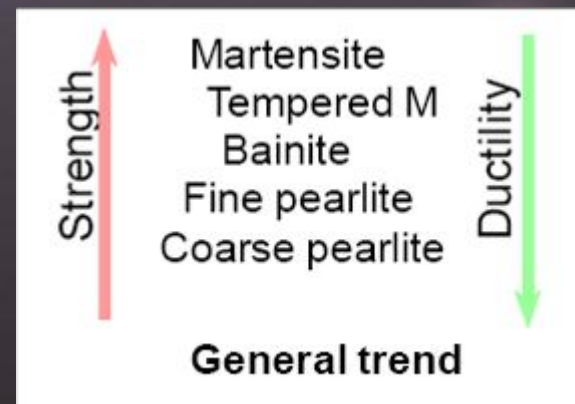
Jominy Bar



Microstructural constituents

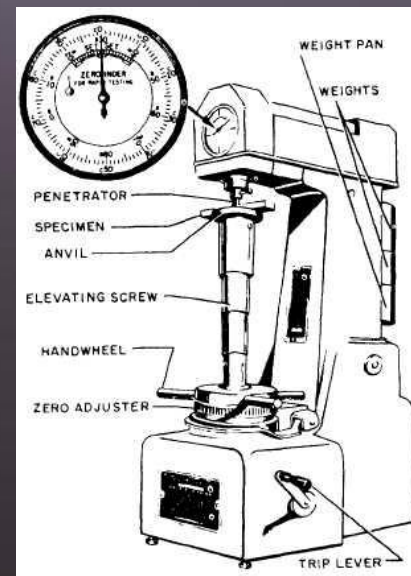
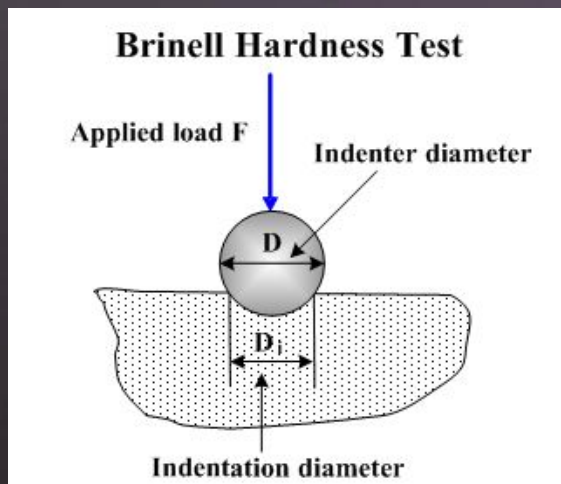


- To get a 100% martensite, it's need to use Fast or moderate cooling rate.
- Only on 2 line we get 100% martensite.
- Comparison of microstructural constituents



Measuring hardness

- Brinell hardness (Hard metal ball is pressed against material)
- Rockwell hardness (hard metal ball or diamond cone pressed against material)
- Vickers Hardness (Diamond pyramid is pressed against material)



Thank you for your attention

