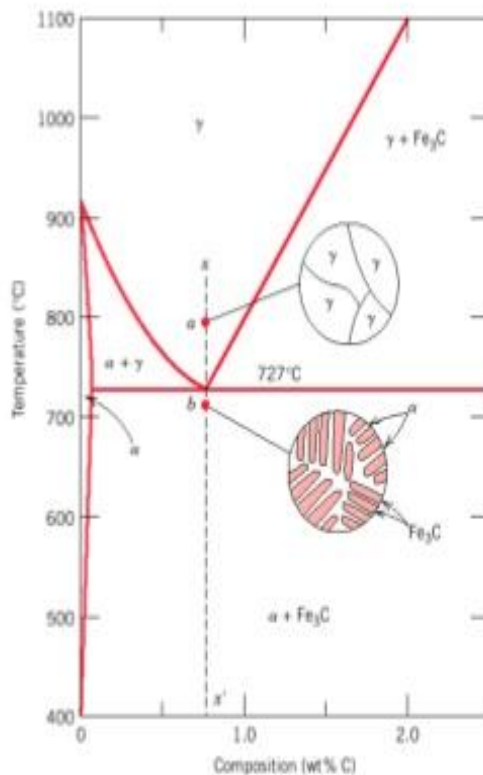


2.4 MICROSTRUCTURE OF SLOWLY COOLED STEELS

2.4.1. Eutectoid steel

Microstructure of Eutectoid steel



- In eutectoid steel, pearlite is formed at eutectoid temperature.
- The austenite gets converted into pearlite which is a mechanical mixture of ferrite and cementite..
- This transformation occurs at 727°C (at constant temperature)

Fig 2.4.1.(a) Microstructure of eutectoid steel

2.4.2 HYPOEUTECTOID STEEL

Microstructure of Hypoeutectoid Steel

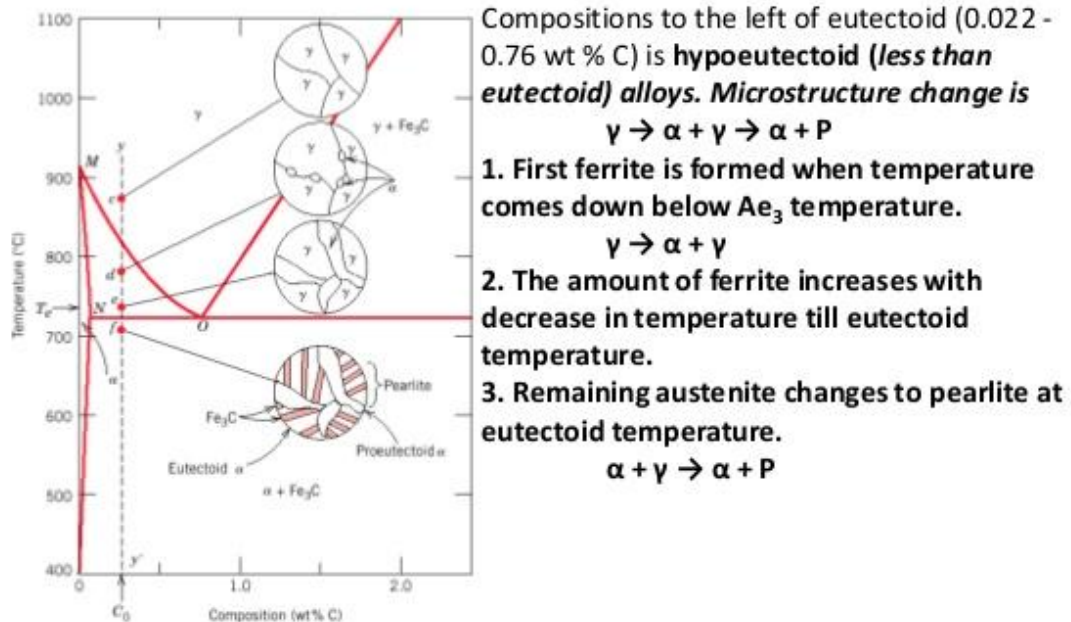
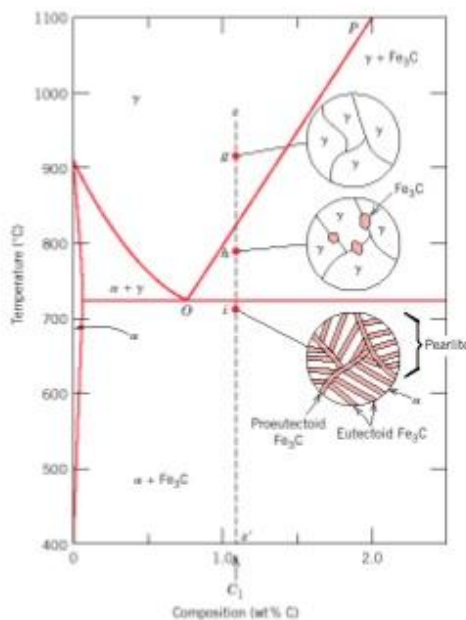


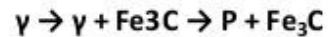
Fig 2.4.2(b) Microstructure of hypoeutectoid steel

2.4.3 . HYPEREUTECTOID STEEL

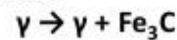
Microstructure of Hypereutectoid Steel



Compositions to the right of eutectoid (0.76 - 2.14 wt % C) is **hypereutectoid (more than eutectoid) alloys.**



1. First cementite is formed when temperature comes down below A_{cm} temperature.



2. The amount of cementite increases with decrease in temperature till eutectoid temperature.

3. Remaining austenite changes to pearlite at eutectoid temperature.

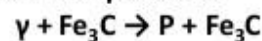


Fig 2.4.3(c) Microstructure of hypereutectoid steel