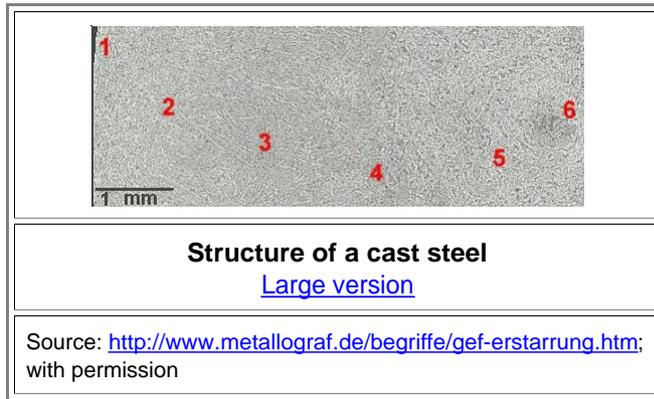


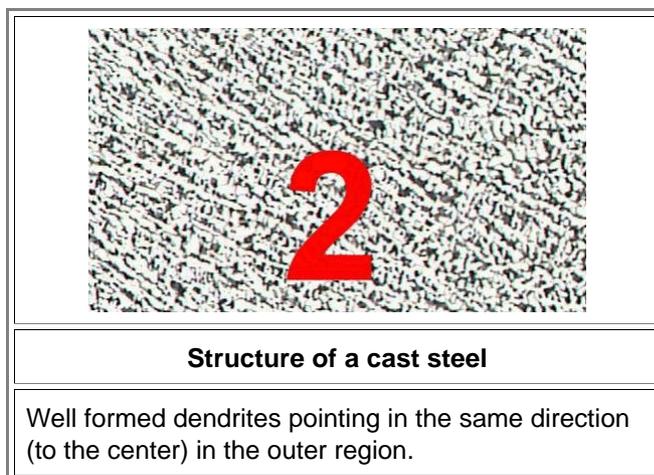
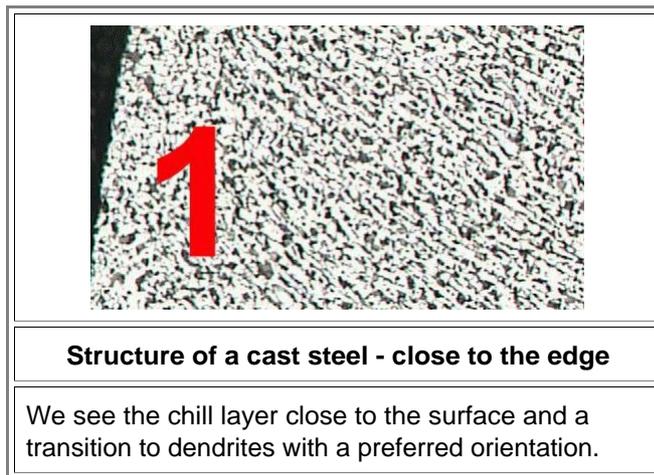
Microstructure of Cast Steel

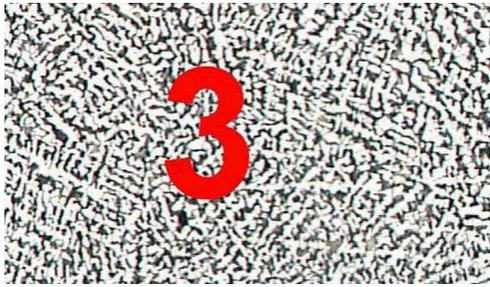
Here is the [picture from the backbone](#) once more:



At "1" is the surface, around "6" the center of the cross-section through a round wire with 13 mm diameter. It is "1.5535 - 22MnB4" steel (or rather normal steel) with about (0,20 - 0,25) % C, 0,30 % Si, (0,90 - 1,20) % Mn and not much else, produced by continuous casting with magnetically stirred melt.

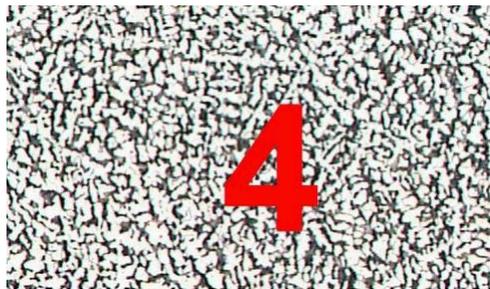
You don't see much at this magnification. Looking a bit closer at the structure around the numbers in the overview above reveals:





Structure of a cast steel

Transition region from oriented dendrites to more randomly arranged dendrites. That is a consequence of reduced supercooling and reduced growth speed.



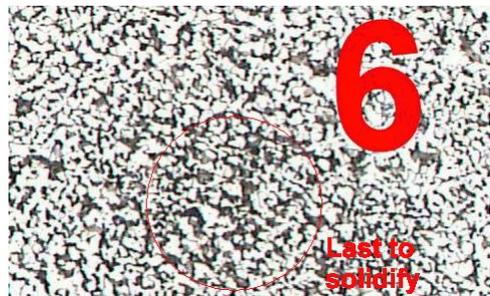
Structure of a cast steel

Randomly oriented dendrites in the transition region.



Structure of a cast steel

Central region with coarse equi-axed grains



Structure of a cast steel

The very centre, with smaller grains due to final macro-segregation (largest impurity and alloy element concentration here).

● Don't complain, I did say that reality is far messier than what we like to show in nice schematic figures!