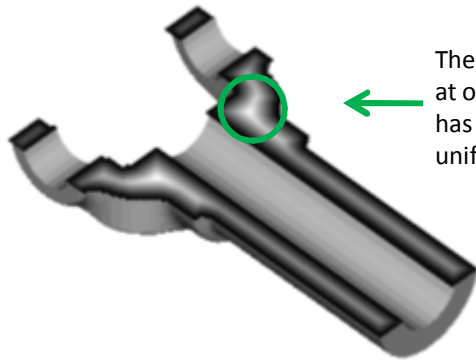
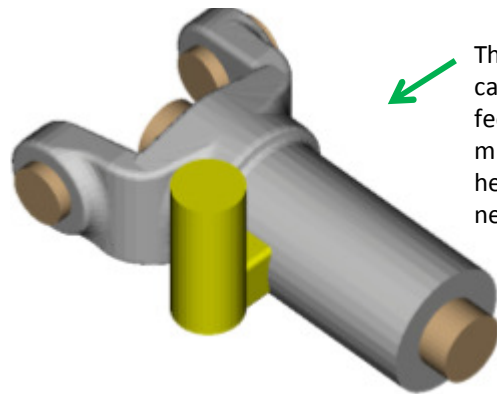
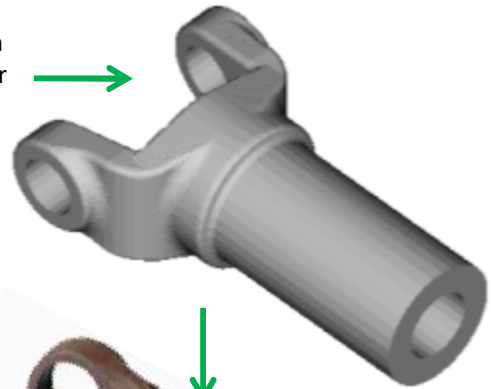


The ductile iron yoke casting of overall size 197 mm x 92 mm x 56 mm weighing 1.7 kg was produced by high pressure molding process. After fettling and machining, macro shrinkage defect was observed next to the feeder connection point.

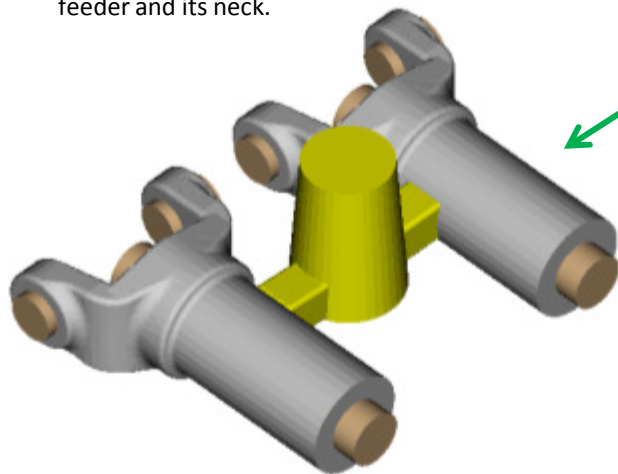
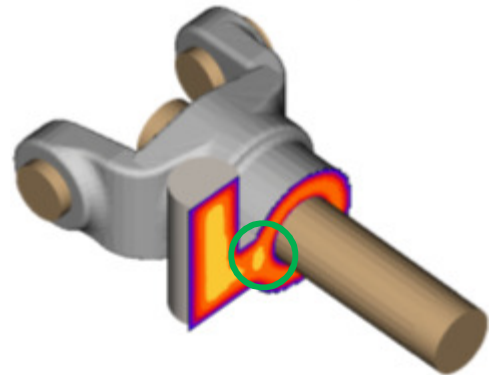


The thickness of 20 mm is at one end; the defect area has a smaller value of uniform thickness.



The methoding of the casting included one side feeder of dimension 25 mm diameter and 60 mm height, with a square neck of 20 mm size.

Simulation of current methoding and solidification simulation indicates a hot spot at the defect location in the actual casting. This is due to incorrectly sized feeder and its neck.



The defect is eliminated by enlarging the feeder and its neck. The yield can be improved by connecting the same feeder to two castings.

Simulation shows better directional solidification, and yield over 75%.

