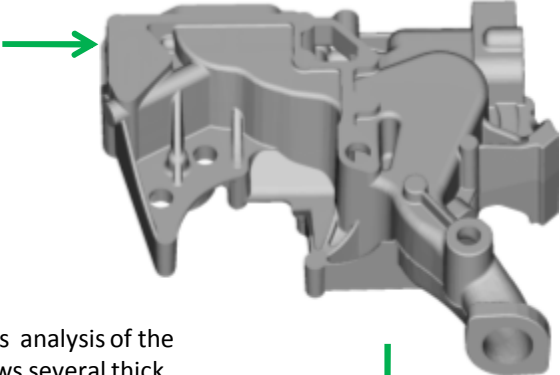


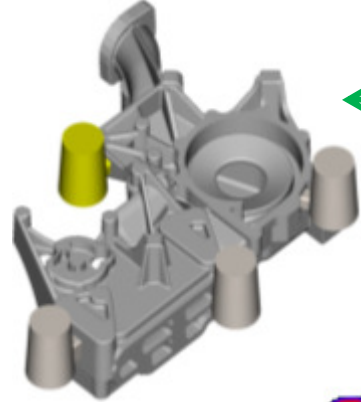
Frame Housing

Cast Iron, Green Sand Casting

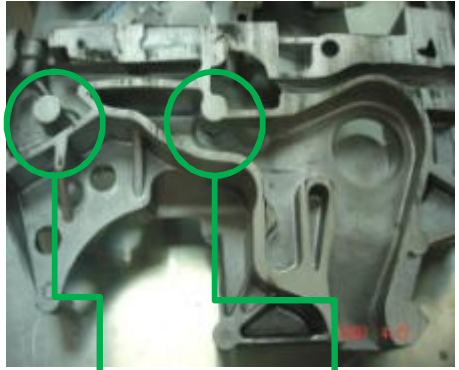
The cast iron frame housing of overall size 450mm x 500 mm x 180 mm weighing 30 kg was in production in a major foundry. It had a very high complexity factor and was prone to multiple shrinkage defects in various sections of the casting.



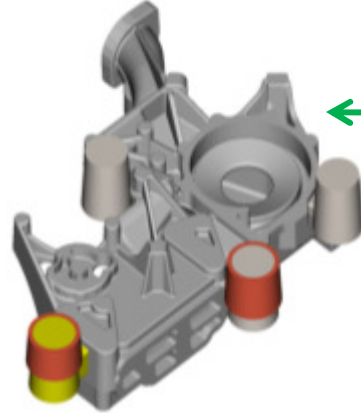
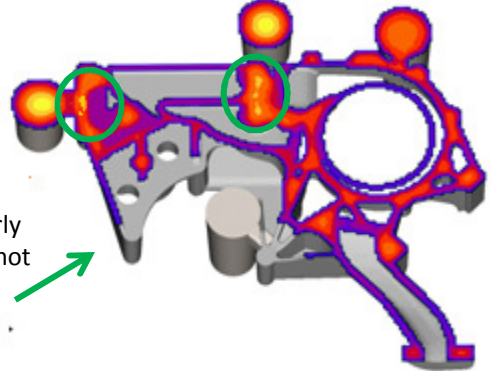
Thickness analysis of the part shows several thick regions and junctions.



The current methoding included 4 side feeders of 50 mm (top) and 60 mm (bottom) diameter and height 85 mm.



Simulation of current methoding and analysis of solidification contours clearly indicates multiple isolated hot spots exactly matching the shrinkage defects found in actual casting.



The methoding is revised by increasing the feeder and neck dimensions and providing insulating sleeves. This resulted in directional solidification between the casting and feeders, giving defect free castings.

