

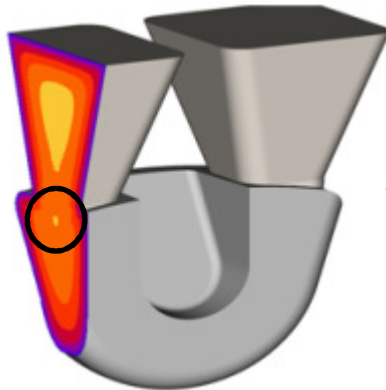
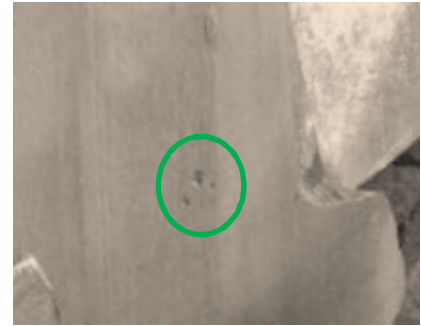
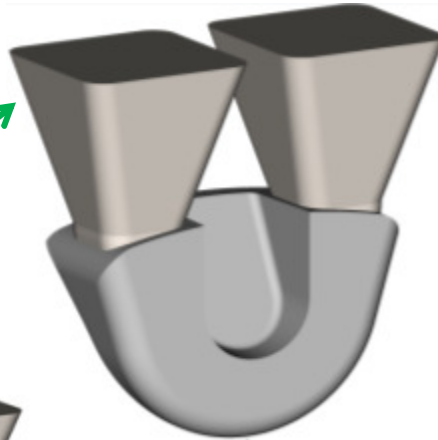
The aluminum lug casting of overall size 185 mm x 80 mm x 140 mm weighing 5 kg is produced in a non-ferrous foundry. After fettling and machining the top faces, it exhibited a small shrinkage cavity just below the riser.



Thickness analysis shows mass concentration in the top portion, corresponding to an inscribed sphere diameter of 54 mm.



The current methoding of the casting includes two square-shaped feeders of top cross-section 100 x 100 mm and bottom cross-section 50 x 50 mm.



Simulation of current methoding clearly indicates that feeders are slightly undersized and an isolated hot spot is observed just below the connection. This exactly matches the shrinkage defect found in actual casting.

The bottom section of both feeders is increased to 80 x 80 mm. Simulation shows that the hot spots are now fed by the feeders, and shrinkage defect is eliminated.

