FLOW-3D® CAST

The Next Generation of Casting Simulation Software

Casting Mold

- Defect localization: mold erosion, cavitation, die soldering, cracks
- Stresses and dissortion
- Heat balance during the cycling process including cooling, spraying, cleaning

HPDC Process

- Reducing scrap and circulating material
- Identification of ideal process parameters (shot profile, PQ²-analysis, metal and mold temperatures)
- Reduction of cycle times (cycling stages, cooling concept)
- Concept identification for venting and evacuation of the cavity

Software Features

- Predefined parameters to achieve fast model setup
- Streamlined workflow
- Intuitive and easy to understand user interface
- Accurate and fast solver
- Powerful and extensive post-processor
- Interactive 3D Viewer

Casting Part

- Defect localization: entrained air, oxides, coldrun, flow marks, porosities, hot cracks
- Quality prediction: microstructure, mechanical properties
- Detection of stresses and distortion
- Achieve the best design for optimized and successful casting production

Casting Design

- Design and position of ingates, runner, venting channels and chill-vents
- Avoid turbulences, flow separation, air bubbles, excessive velocities
- Display of ideal overflow positions
- Feeding of hotspots (squeeze pins)
- Optimization, DoE and automatization with sensitivity analysis and response surfaces