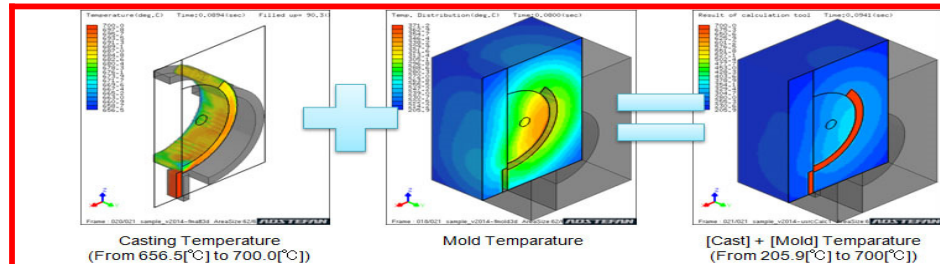
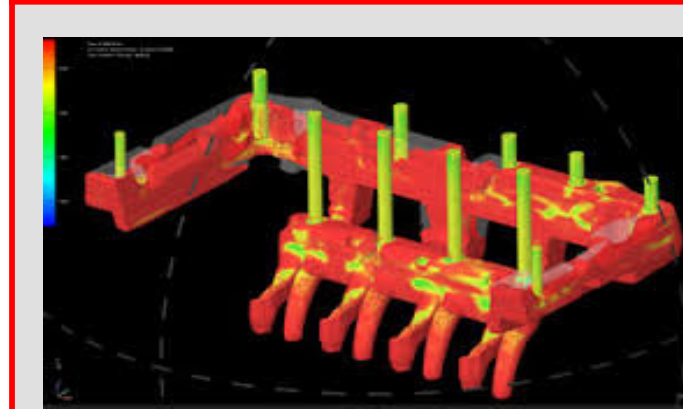


ADSTEFAN –World’s Fastest Casting Simulation Software from Hitachi



The Executing Example by Calculation Tool (Casting Temp. + Mold Temp.)


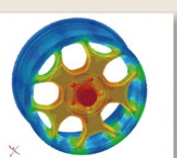
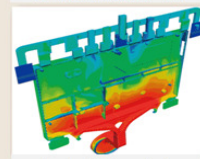



Analysis Method

- FDM (Finite difference method)
- Mixed elements method
- CIP method

Reliable & Fast Solution for a wide variety of processes

- Die-casting (HP, LP)
- Squeeze casting
- Gravity casting
- Sand mold casting process
- Metallic mold casting
- Thixotropic mold
- Lost-wax
- Gradient casting,
- Centrifugal casting
- Succession casting
- ESR casting
- Semi-solid casting

<p>Defects:</p> <ul style="list-style-type: none"> • Misrun • Flow line, Cold shut • Shrinkage, Micro porosity 	 <p>Throttle Chamber (Aluminum)</p>	 <p>Wheel (Aluminum)</p>
<p>Design Improvement:</p> <ul style="list-style-type: none"> • Position/Geometry of Gate • Injection Speed, Metal Temperature, Die Temperature • Position/Size of riser • Position of Cooling 	 <p>Laptop PC (Magnesium)</p>	 <p>Engine Parts (Cast Iron)</p>
<p>Effects:</p> <ul style="list-style-type: none"> • Quality Improvement • Reduction of Development Time 	<p>http://www.adstefan.com/index.html</p>	

Comprehensive Tool for Casting Defect Assessment and Optimum Designing

- ❖ Misrun, Cold shut, Flow line, Air entrapment, Gas porosity
- ❖ Shrinkage cavity, Micro porosity, Cold flakes, Hot spot
- ❖ Soldering, Casting distortion, Crack
- ❖ Considering filling speed, filling temperature and die temperature
- ❖ Considering and optimizing overflow, riser, runner and gating position

Kadkraft Systems Pvt. Ltd.

SCO 196-197, Sector 34-A, Chandigarh-160 022 INDIA.

Phone: +91-172- 2661 311, 98140 21311

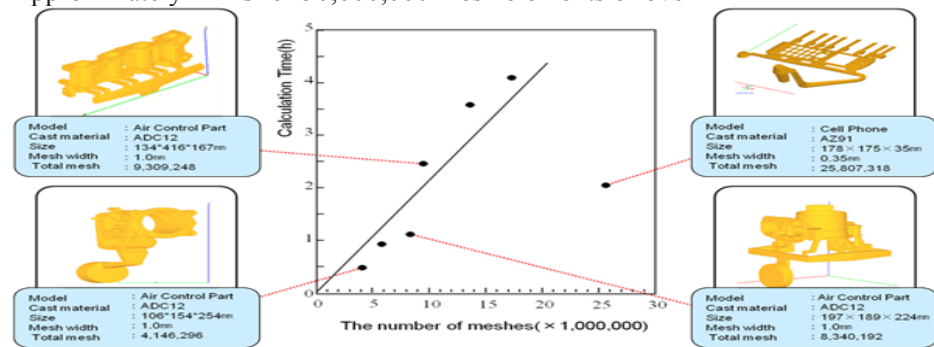
Highlights

- Technology from Hitachi, Japan
- Fastest solver available in the market
- Over 500 global users
- Solver – FDM (Finite difference method), mixed elements and CIP method
- Very high speed – 2 hours solving time for 20 million mesh
- Up to 3-5 times faster compared to other solutions
- Automatic geometry repair of STL data
- Automatic fast meshing
- Over 160 strong material library
- Automatic analysis report in Excel format
- Available for 64 bit computers

Complex Casting Simulation Made Quick and Easy

1. Quick and Accurate Results

Approximately 2 hrs in case total numbers of mesh elements are less than 10,000,000.
 Approximately 4hrs for 20,000,000 mesh elements.
 Approximately 14hrs for 50,000,000 mesh elements or over



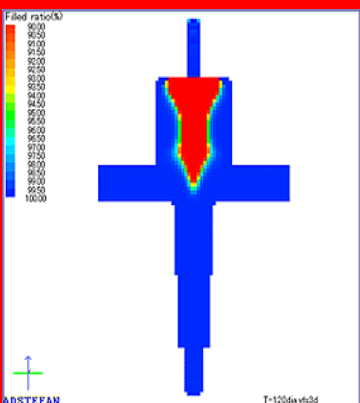
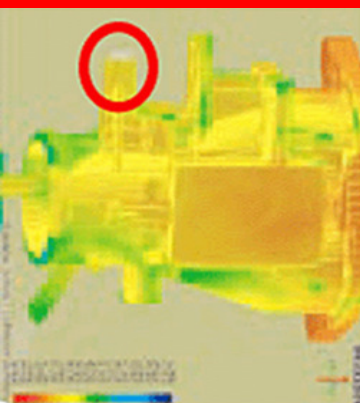
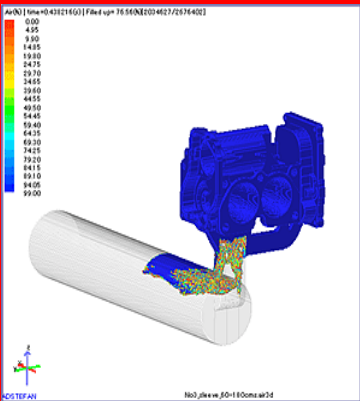
2. Simulation to Predict Key Process Parameters

- Fluid Flow
- Thermal stress
- Solidification
- Macro-structure prediction
- Die-temperature
- Heat-treatment

3. Powerful Result Visualisation

- ❖ Post processor visualizes the result files in 3D. Various display methods are available on the Post processor, such as section surface display or emphasis display by setting scaling values.
- ❖ Fluid Flow Analysis Results: Temperature, Filling ratio, Velocity, Flow rate, Vorticity, Volume of entrapment air, ratio of reminding air, etc...
- ❖ Solidification Analysis Results: Distribution of solidus ratio, Temperature gradient, Corrected temperature gradient, Casting temperature, Die temperature, Cooling rate, Degree of soundness, etc...
- ❖ Display Methods: Marker display, Vector display, Counter line display, Graph display, display of volume of molten metal
- ❖ Generation of animation file

Complex Casting Made Easy with ADSTEFAN!!!



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