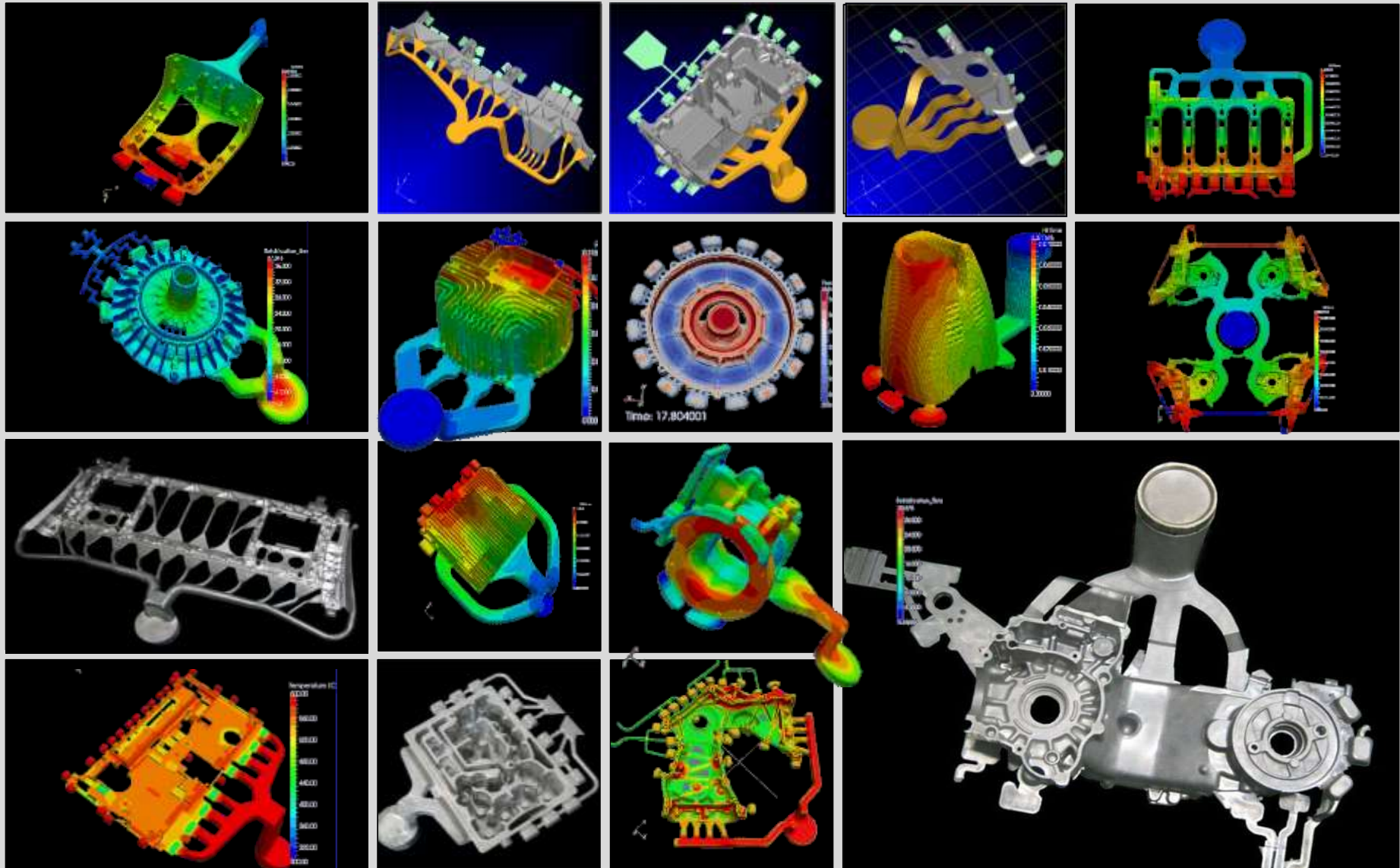




ABOUT US

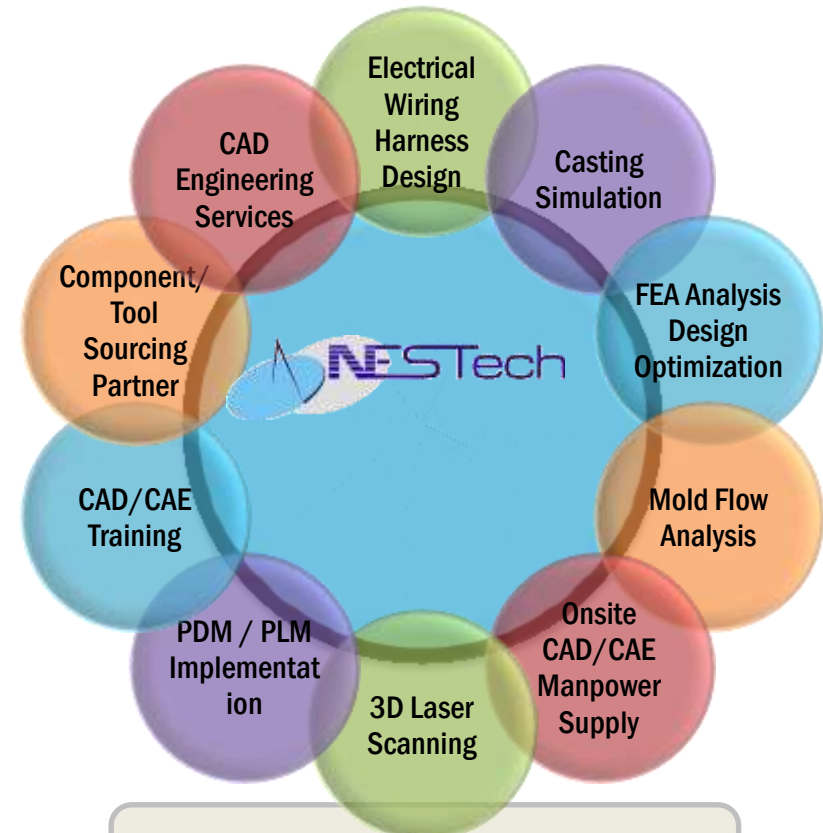
NESTech is a leading Engineering Service & Solution provider for major engineering companies in India and worldwide. Our solutions always come with our experience of handling major projects for various leading companies worldwide thus providing faster deployment and accelerated results.

NESTech, by its rich experience of promoters and their in-depth experience of handling major projects worldwide give our clients much needed hand-holding when it comes IT deployment in their core areas.

Our team consists well-experienced professionals from multi-disciplinary engineering. All our team members are constantly and consistently trained with latest tools and methodologies. Our skill sets range from major CAD/CAM/CAE/PLM software deployment, data generation, data migration, project configuration and offshore services. We also provide on-site training to our clients and their suppliers thus taking a major lead towards faster results. Our training cell in India also supplies highly skilled manpower in all major CAD/CAM/CAE software and solutions.

- NESTech group started in 1995 – **Over 18 years in Service from Coimbatore and Chennai in India.**
- 200+ CAD/CAM/CAE/PLM Projects Experience for customers across Europe, USA, Japan and in India

OUR SERVICE SPECTRUM



OUR PRODUCT SPECTRUM

Siemens PLM Solution Partner

Moldex3D Solution & Service Partner

C3P Solution & Service Partner

ABOUT C3P SOFTWARE INTERNATIONAL

• US based company

- Focus on virtual manufacture process to help industry to catch up 'Time to Market
- Shifting software R&D to Asia step by step since year 2008

• World-wide Distribution

- Valued-Added-Distributor (VAD):
- Asia: China, Japan, Korea, Singapore, India and Australia
- Europe: Germany, Spain, Italy, Turkey
- North America: USA, Canada
- Latin America: Brazil
- Africa: South Africa



• Products



CAST DESIGNER

Casting Simulation for HPDC, Gravity, Investment Castings



FORM ADVISOR

Increment based die design & CAE for sheet metal forming process



GEO DESIGNER

Design for Manufacturing and Upfront Analysis Tools

CAST DESIGNER STRATEGY

Cast-Designers is developed with the aim to check 3-5 various gating system design and choose the best within 2-3 days of time. This could be only possible if we have gating system design facility inside CAE software hence we have provided full parametric easiest possible option to create gating system design and one can modify it any point of time by just entering new dimension value and CAD model automatically changes accordingly. This plays a vital role and save lots of time compare to any of our competitors.

	Traditional CAD + CAE	Cast-Designer
Preparation the geometry for simulation	3h	30 mins
Mesh and Setup the model	5h	15 mins
CPU time	10h	1h
Design #1	1 Day	< 2 hours
Modify geometry	1h	15 mins
Remesh and re-setup	5h	15 mins
Re-run the simulation	10h	1h
Design #2	1 Day	< 2 hours

NESTech is the authorized partner in India for C3P Software International, USA



CAST DESIGNER: FASTER CASTING SIMULATION

Cast Designer from C3P Software International, USA, is a combination of CAD, Casting CAE and with expert system knowledge base of casting process.



With Cast-Designer, users can optimize a casting design by detecting the part features with potential flow and solidification problems, evaluating gate system and overflow design alternatives in the early design stage. Even a novice in simulation can easily undertake the design setup. In other word, Cast-Designer can help the industry to achieve the target of 'Time to Market'.

Expert System

- Expert system for casting system design with Built-in knowledge about complete casting system design.

Built-in Wizards

- Built-in capability to create complete ingate, gate runner, runner, sprue runner etc. in parametric 3D using Wizards with recommended value for speed-up ratio

FEM Technology

- Based on latest FEM technology, the lead time is 2 to 3 times faster compared to traditional CAE tools.

Industry & Institutions

- Developed by C3P Software with very close collaboration with world top level industrial partners, research institutes and universities.

SUPPORTED CASTING PROCESS

- Sand Casting
- Gravity Die Casting
- Tilt Casting
- Centrifugal Casting
- High Pressure Die Casting
- Low Pressure Die Casting
- Los Wax /Investment Casting
- Lost Foam

SUPPORTED MATERIALS

- Cast Iron
- Steel
- Stainless Steel
- Aluminium Alloys
- Cooper Alloys
- Nickel Alloys
- Zinc Alloys etc

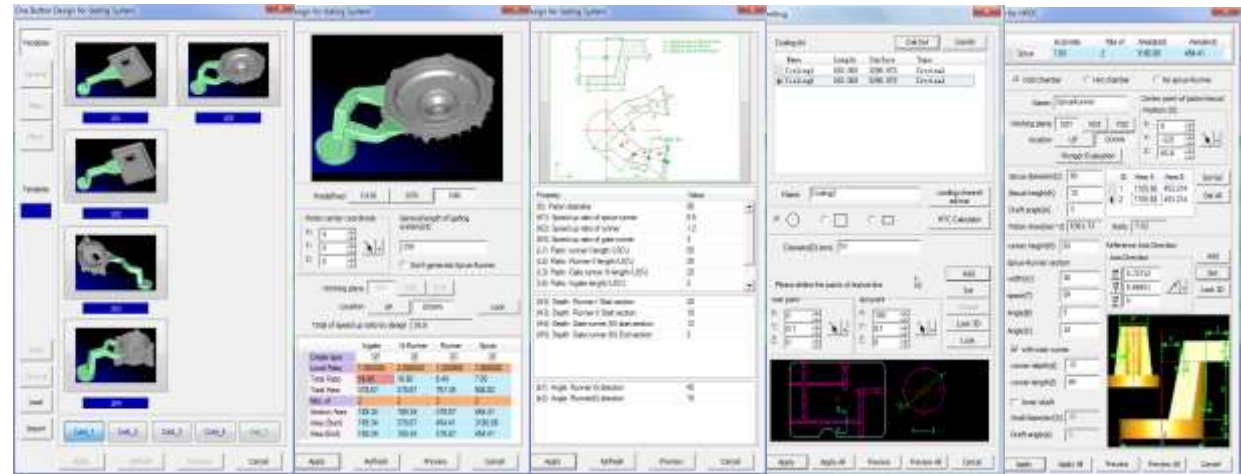
**Cast Designer is the
ONLY
software which offers
built-in tools &
wizards
to create
complete gating
system**

**Cast-Designer can
make the
“FULL COUPLE”
analysis of
thermal,
flow
&
mechanical stress.**

DESIGN ADVISOR FOR HPDC

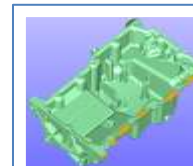
One Button Design For Casting Gating System

1. Select from pre-defined complete gating system template, more than 20 inside the software package.
2. Built-in Wizards to create Gating/Cooling system components.
3. CAD Capability inside Cast Designer includes 3D Solid, Surface & Curves, Extrude, Blend, Sweep features etc



DESIGN ADVISOR

Guiding designer carries out the design process in a simple way. Basing on the mass or volume of casting as well as geometry and casting alloy type, the system can estimate the filling time automatically, and guide to select the casting machine correctly. It also can predict the 1st and 2nd speed, critical shift point of cold chamber machine and calculate the final section areas for inner gate, gate-runner, runner and sprue runner. All the number of gates and runners could be evaluated and adjusted in real time.



Ingate



Gate Runner



Runner



Sprue Runner



Over Flow



Air Venting

What is CAST DESIGNER?

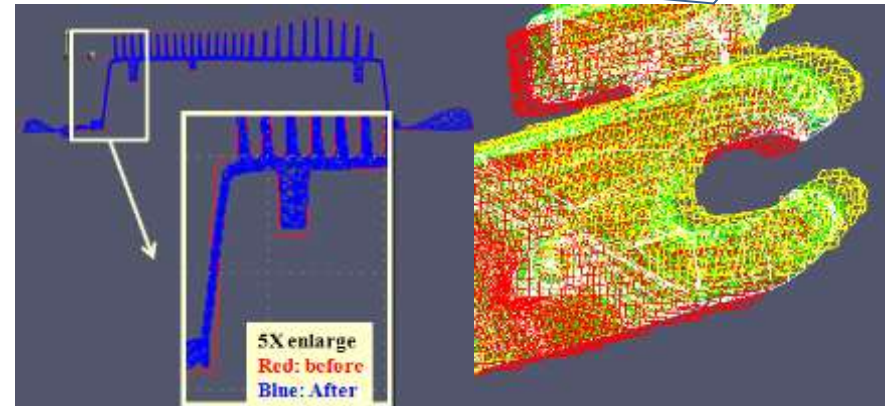
Die & Casting Part Distortion: Prediction & Control

Cast-Designer consistently predicts the dimensions of a cast part after cooling. Cast-Designer allows to compensate for the part distortion during the die design stage itself. It will ensure greater dimensional accuracy.

- Predict the high stress regions
- Obtain the gap formation during thermo-mechanical calculation
- Hot Tear and Cracking Identification
- Dimensional Contraction and Distortion
- Distortion compensation of the casting
- Predict the stress distribution in the mould
- Thermal fatigue sensitive areas in the mould

White: Original Part
Red: Deformation in Original

Yellow: Compensation part
Green: Deformation in Compensation Part

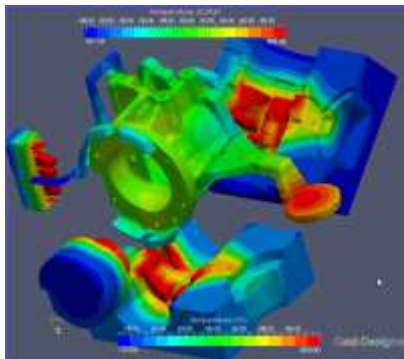


FULL MOLD ANALYSIS

For Accurate results

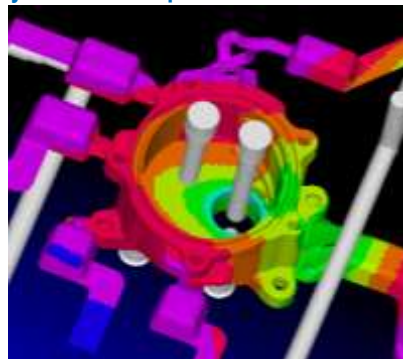
with Cooling Channels

Mold Cyclic Analysis



FAST COOLING ANALYSIS

Quick results in 5 minutes. Check the effect of Cooling Channel system on the part

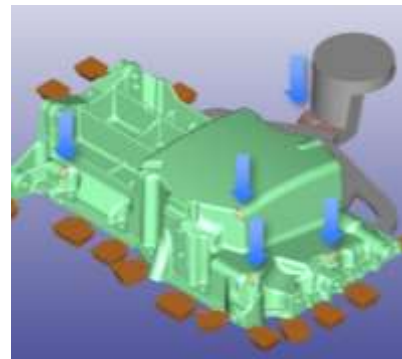


AUTO HEALING

Powerful Meshing Capability

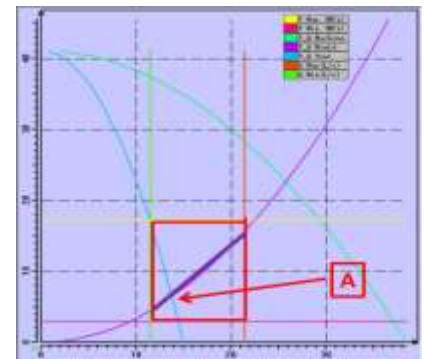
CAD data with holes and overlap?

No problem, simply make the mesh.

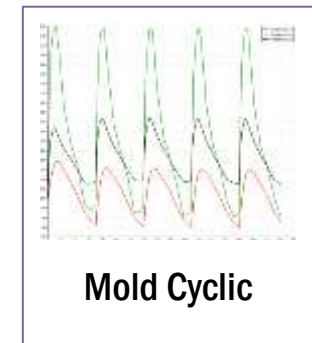
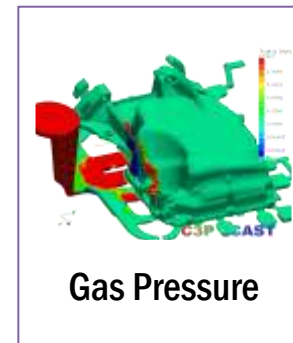
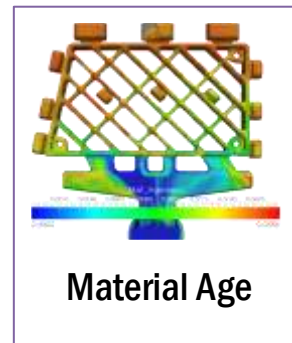
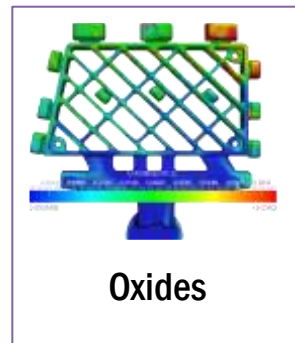
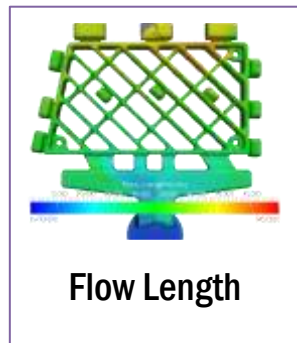
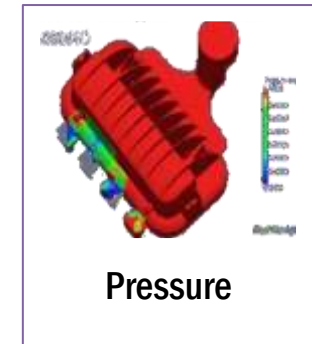
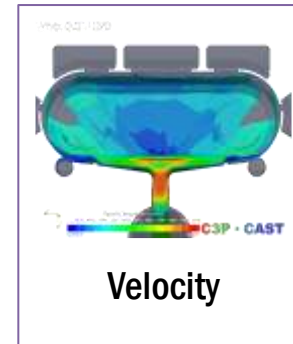
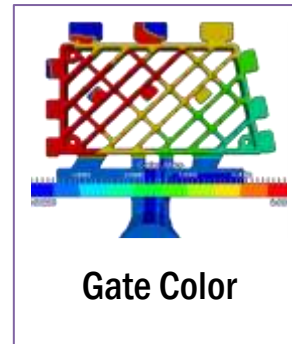
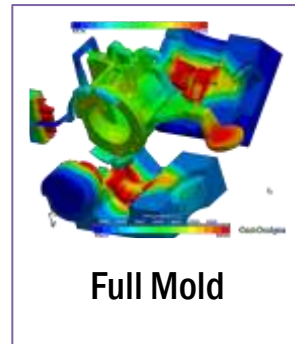
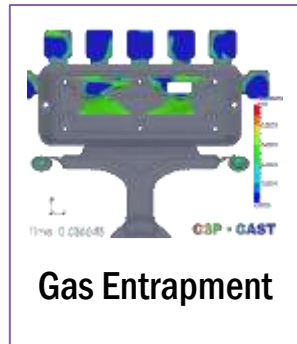
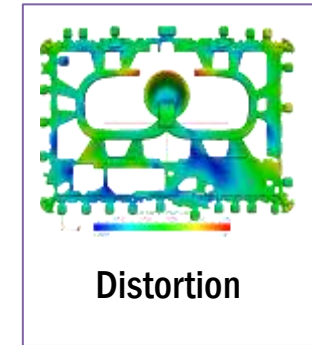
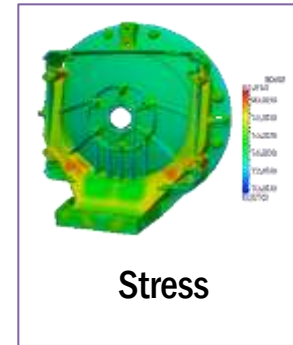
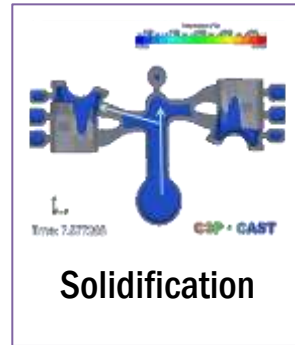
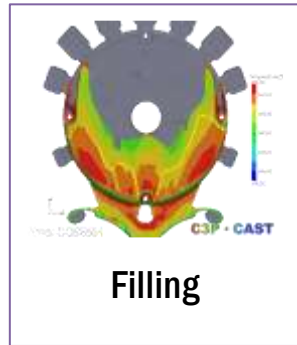


P-Q GRAPH

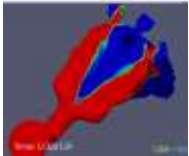
The program will calculate the critical process characteristics that you must maintain to achieve the desired results.



SOME OF THE CAST-DESIGNER CPI RESULTS



CUSTOMER TESTIMONIALS



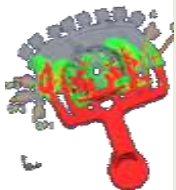
We are a lamp company and all the new design has focused on March, April in the first half year and August, September of the 2nd half year. We have to evaluate at least 200 mold sets during these two months. **Nothing can do that until we found Cast-Designer.**

Engine is the heart of automotive, we must evaluate all the parameters for each new design and release. There are at least 4 major plans, and at least 20 sets parameters for each plan. For traditional CAE method, if we assume **2~3 days for each design parameters, the whole evaluations period should be at least half year.**

After acquired Cast-Designer CPI, we only spent 3 weeks to finish 80 sets parameters, so we have more time to improve the new design and try more design concept. **The whole development cycle could be saved at least 2 months.**



As the pioneer of electronic power tools, we have purchased the CAE simulation software and set the CAE team. However, we still meet the bottom neck problem during the diary work. The first problem is the simulation speed was too slow, usually 2 days for one result; the 2nd is the CAE team do not understand how to make design and CAD team no any knowledge for analysis, so the simulation is only for beauty picture but not really help design too much.



We are quite surprise the result and benefit of Cast-Designer, the simulation time was only 1 to 2 hours and the design capability make the CAD team and CAE work can join together. Now, we evaluate at least 3 to 4 plans for each new casting.

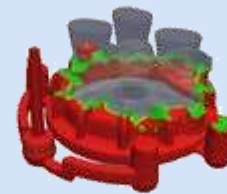
CASTING CONSULTANCY

Casting simulation & methoding services for gravity, sand, HPDC, LPDC, investment castings

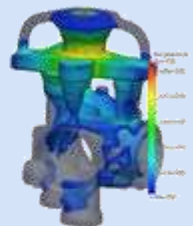
Check your casting and predict shrinkage, porosity, flow, air entrapment defects – without incurring tooling costs or waiting for trials. Assess your method for potential defects. Optimize it for quality and yield improvement.



HPDC



Gravity



Investment

Quality Improvement & Yield Optimization

Option A: Evaluate casting design developed by foundry

Option B: Complete Casting Design & Development Consultancy

SOME OF OUR CUSTOMERS



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