

MAGMA News

Thailand Edition

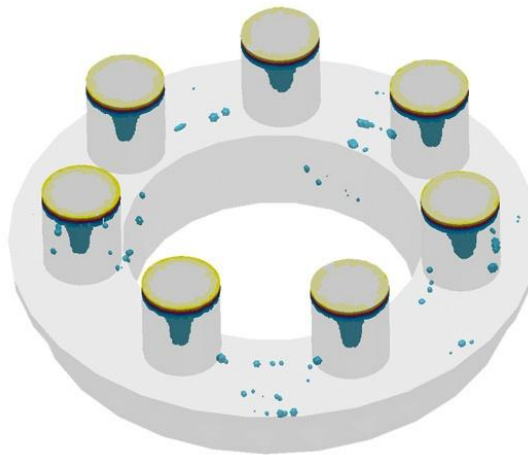
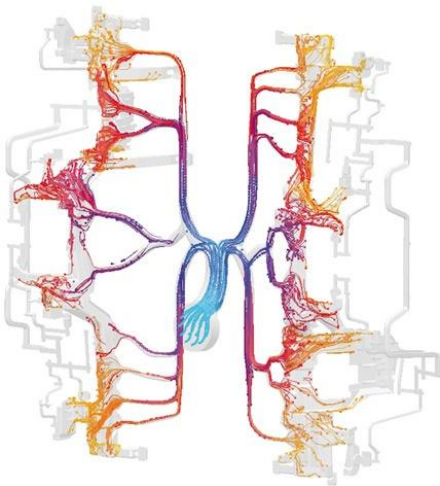
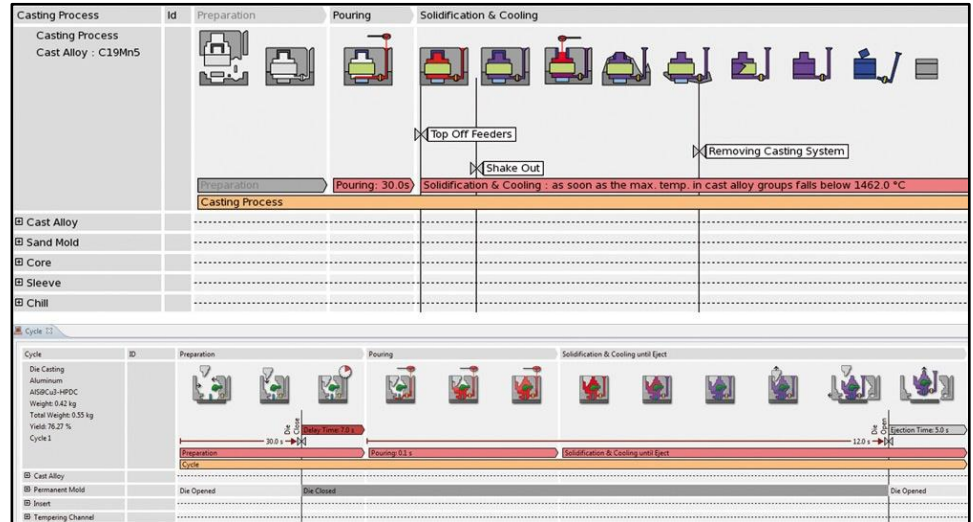
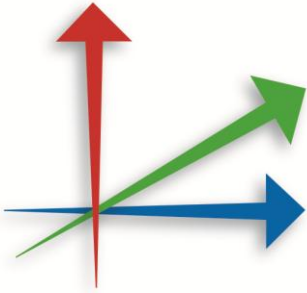
5 Engineering
Casting Process Optimized

Issue No.: 9 October 2015

MAGMA Thai Newsletter	MAGMA ⁵ - fully optimize
<p>Do you want to publish an article or success story? info@m5engineering.co.th</p>	<div data-bbox="842 539 1107 647" data-label="Image"> </div> <p>MAGMA⁵ is the comprehensive and effective simulation tool for improving metal casting quality, optimizing process conditions and substantially reducing costs in production. The software enables the establishment of robust process conditions and optimized casting layouts for all cast materials and processes. MAGMA⁵ is designed to predict total metal casting quality by simulating mold filling, solidification and cooling. Residual stresses and distortion, as well as microstructure formation and property distributions can be assessed in all casting manufacturing processes. Simulations can be used in a virtual test plan to pursue different quality and cost objectives simultaneously.</p>
<p>What's new?</p> <div data-bbox="233 703 357 860" data-label="Image"> </div> <p>MAGMA/M5 Engineering Ltd. Relocated to new Office</p> <p>Dear all...</p> <p>Please note that we changed our office locations to the new address below:</p> <p>567/46 Pradya Biz Home Onnut 67 Prawet, Bangkok 10250, Thailand Tel : +662116 6262 / +66884911841 E-Mail : info@m5engineering.co.th Website : www.m5engineering.co.th</p> <div data-bbox="118 1321 474 1574" data-label="Image"> </div>	<div data-bbox="638 969 1415 1541" data-label="Figure"> </div> <p>With its modular design, MAGMA⁵ contributes to cost reduction along the complete process chain of a cast component: from conceptual to final component design, tooling layout and prototyping, all the way through to process optimization, reliable production and quality management.</p> <div data-bbox="266 1720 1326 2004" data-label="Image"> </div> <p>Interactive parametric gating and risering design</p>

Practice oriented approach to production engineering

MAGMA⁵ is designed to support all aspects of casting manufacture, from casting design, melting and metallurgy, pattern and mold making, and casting itself through to heat treatment, fettling and repair.



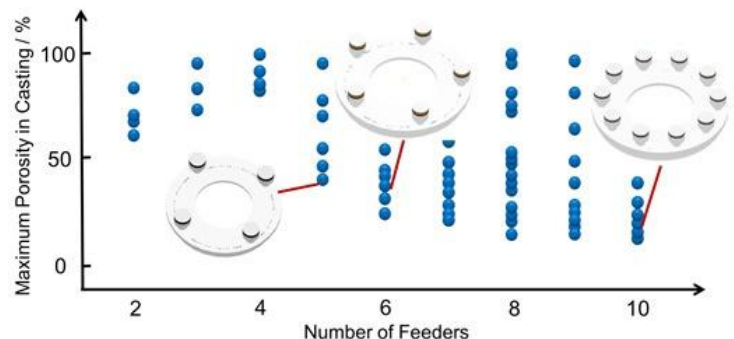
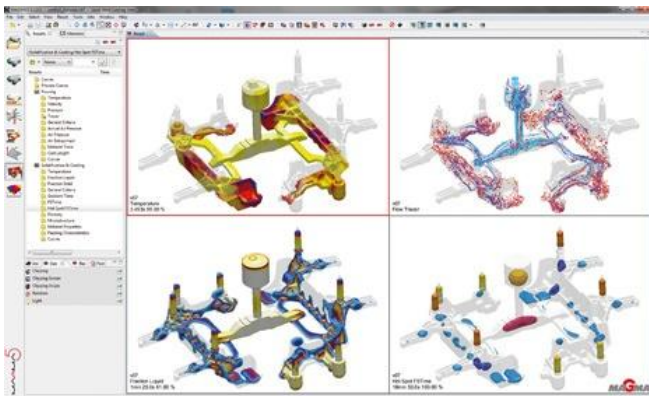
MAGMA⁵ can be used for all cast materials, ranging from gray iron, sand and die cast aluminium, to large steel castings. MAGMA⁵ is also applicable to all metal casting processes, for example allowing the die caster to design robust tooling layouts, minimize cycle times and predict reproducible casting quality, by using virtual experimentation during casting, tool and process layout.



MAGMA

The cost benefits of using MAGMA⁵ in the production or in design are:

- **Avoiding** metal casting defects that arise from misruns, turbulence, oxide and slag entrainment, gas porosity, and shrinkage
- **Optimization** of the filling process to provide a fast but smooth and controlled flow
- **Time savings** in the robust design and dimensioning of gating and risering
- **Cost reduction** from material usage through productivity, quality, and energy costs
- **Reduction of cycle times** and **maintenance costs**
- Establishment of **robust process windows** for a seamless and secure start of production
- **Increased security** by checking operating points and through proven process conditions
- **Minimization of start-up costs** through modifications to patterns or tooling
- **Improved communication** within your company and in cooperation with customers
- **Increased customer confidence** through a proactive demonstration of metal casting competence

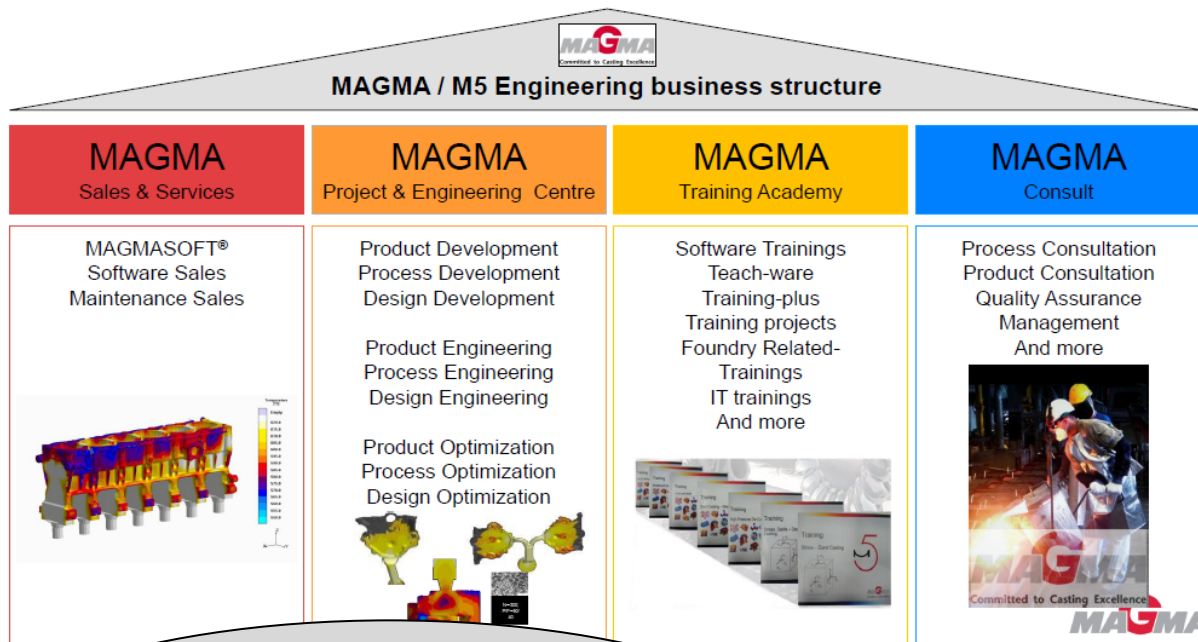


Automatic result evaluation and quantitative assessment of robust processes and optimized solutions

MAGMA5.3– Metal casting! Understanding! Robustness! Profitability!

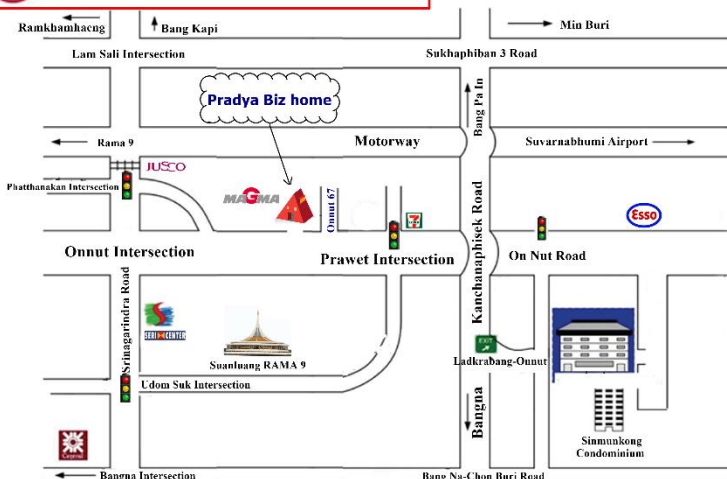


M5 Engineering provides the following services:



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