

Delivering casting solutions

Sim-Cast are helping customers deliver new products quicker with increased quality – Part 1 of 2

New Product demands

Today's new products not only need to function cost effectively, be produced with minimum impact on the environment, but also need to be delivered in record time with minimum risk.

To help customers achieve these objectives, Sim-Cast are delivering solutions in the form of casting simulation, production of tool less wax patterns, supply of tooling and validation of proposed techniques, which allow for the understanding of product capability earlier in the product design process.

New Product development stages

Sim-Cast break the Product Introduction stages into three areas identified as virtual development, tool less development and production development.

Virtual development

Here product definition is obtained in its earliest form from the design engineer so simulations can be performed to understand the upfront risks of geometry. As identified in the August newsletter, Sim-Cast's specific improvement objectives are aligned to the quality and life cycle costs of the product. These include the early development of a product that achieves;

- Metal utilisation of > 85%
- Scrap of < 20%
- Wax assembly labour < 90 seconds / part

These objectives are optimised until the design definition is frozen, at which time greater effort can be put into the development and validation of parameter settings to be used for the process.



This issue – September 07

- New Products
- Improvement objectives

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Previous Issues

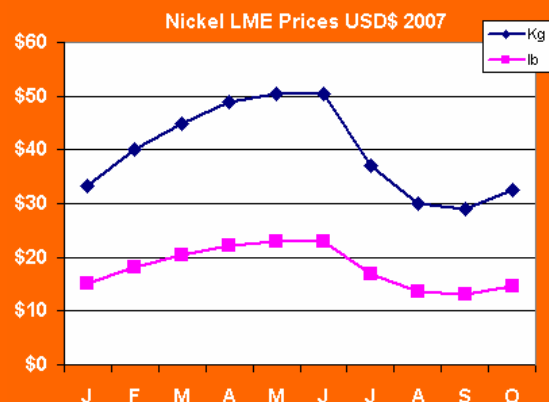
- [March 2007](#)
- [April 2007](#)
- [May 2007](#)
- [June 2007](#)
- [July 2007](#)
- [August 2007](#)

Metal prices bounce back

Metals prices saw substantial gains this month as investors hoped that the US move to cut interest rates would provide a solution to global economic woes and raise demand for the metals.

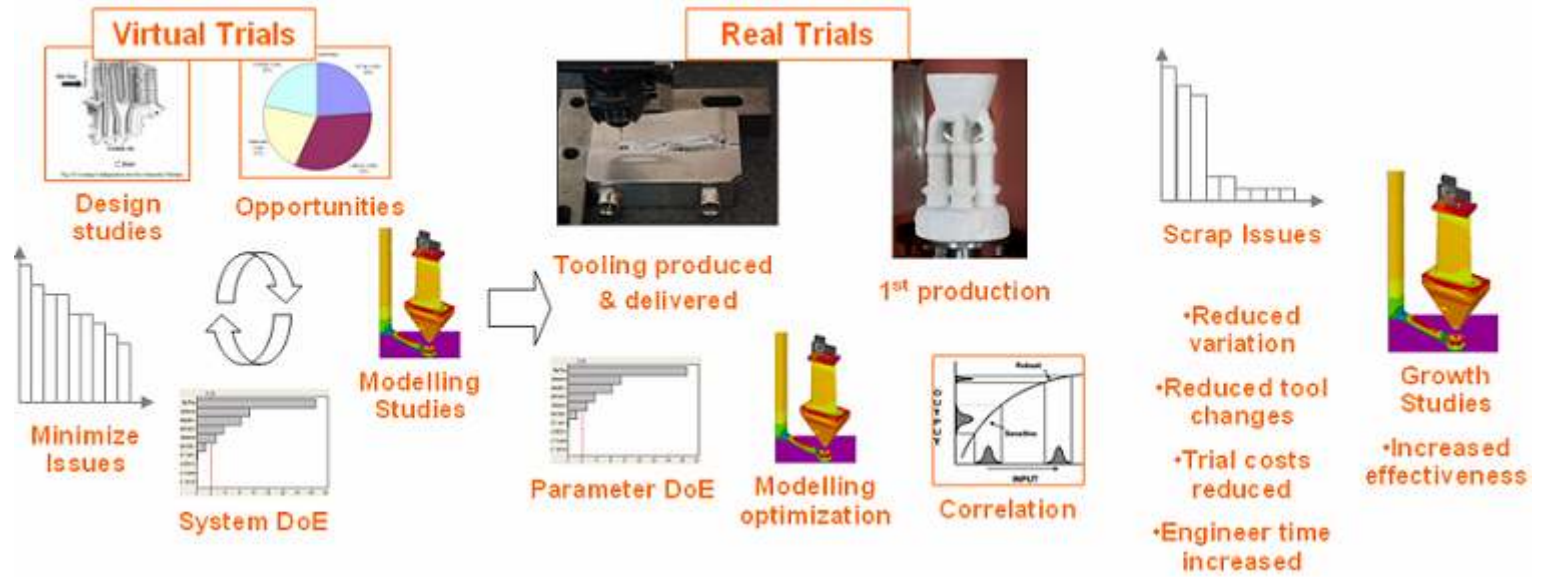
[Nickel largest gain in 19 years](#)

[Latest Platinum prices](#)



Why use Sim-Cast

Sim-Cast's holistic solutions are also applied to the development of a new product, delivering a robust and high quality solution from the first injection throughout the products lifecycle.



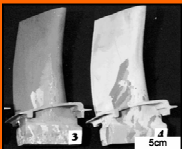
Business benefits

Sim-Cast's experience and capabilities offer unique opportunities to achieve exceptional performance, and are helping their customers meet increasingly demanding improvement goals and targets.

Sim-Cast focus on solutions for today's problems and deliver;

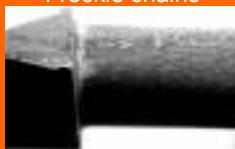
- Reduced metal usage and labour costs
- Improved new product development process and time to market
- Increased business capability and capacity
- Increased knowledge and understanding of the process
- Centralised, optimised and standardised processes
- Improved ability to handle capacity fluctuations

HABs



[Ref: Spowart & Mulles, 2003]

Freckle chains



[Ref: Beckermann C, 2000]

Porosity



[Ref: Machine design iss 10144]

Re-crystallisation



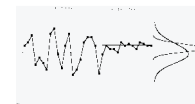
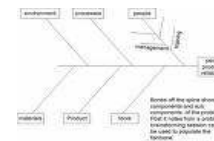
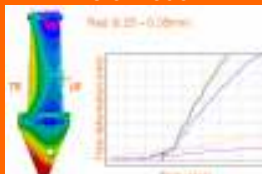
[Ref: Burgel et al, 2000]

Metal Costs



[Ref: LME Nickel Prices 2002-2006]

Deformation



Identifying today's problems

Providing today's solutions