

Simulation of solidification and heat treatment of alloys

Written by Kamoutsi Eleni

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LoM has the necessary computational tools and the experience to conduct demanding simulations of metallurgical processes in the following areas:

Casting

Simulation of solidification paths

Simulation of microsegregation of alloying elements during solidification

Heat treatment of Aluminum Alloys

Simulation of homogenization after casting

Simulation of solution treatment

Simulation of aging treatment

Effect of alloying elements on the above treatments

Heat treatment of Steels

Calculation of austenitization temperatures

Simulation of austenitizing treatments (time-dependent)

Simulation of annealing treatments

Simulation of carburizing and nitriding treatments

Effect of alloying elements on the above treatments

The computational tools include the powerful thermodynamics and kinetics software Thermo-Calc and DICTRA with the associated databanks. LoM operates these software packages for the last 15 years.

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