SECO/WARWICK

INVENTION MEETS RELIABILITY

SimVac

Advanced simulator for steel carburizing and hardening processes

SimVac

SimVac advanced simulator for steel carburizing and hardening processes. The solution for determining the hardness and profile of carbon in the material before treatment.

FEATURES

- An advanced, two-module simulator for vacuum carburizing processes for four types of carburizing mixes – SimCarb™ for carbon profiles, and SimHard™ for microhardness profiles.
- Availability of all material grades from the group of structural steels for carburizing (according to standards: AISI, EN, PN, GOST, DIN) and selected grades of high-alloyed steels used in aviation,
- Potential to create custom material grades that match a specific chemical composition,
- A quick method to determine the correct parameters of the carburized layer in the material without the need for costly trial processes,
- Ability to verify the influence of various process parameters on the final properties of the carburized layer,
- Functionality to generate reports from multiple simulations and compare them in a single sheet,
- /Ease of running simulations thanks to an intuitive process wizard.

FUNCTIONALITIES

- Ability to run simulations in automatic or manual mode,
- Potential to create a custom chemical composition of the material,
- Functionality to edit all key vacuum carburizing parameters (e.g. material type, temperature, carburizing and diffusion times, active surface, mixture composition) and carburizing gas volumes,
- Graphical representation of the carbon or microhardness profile as a function of the distance from the surface,
- Possibility to compare and analyze multiple processes,
- including those performed and/or saved previously.

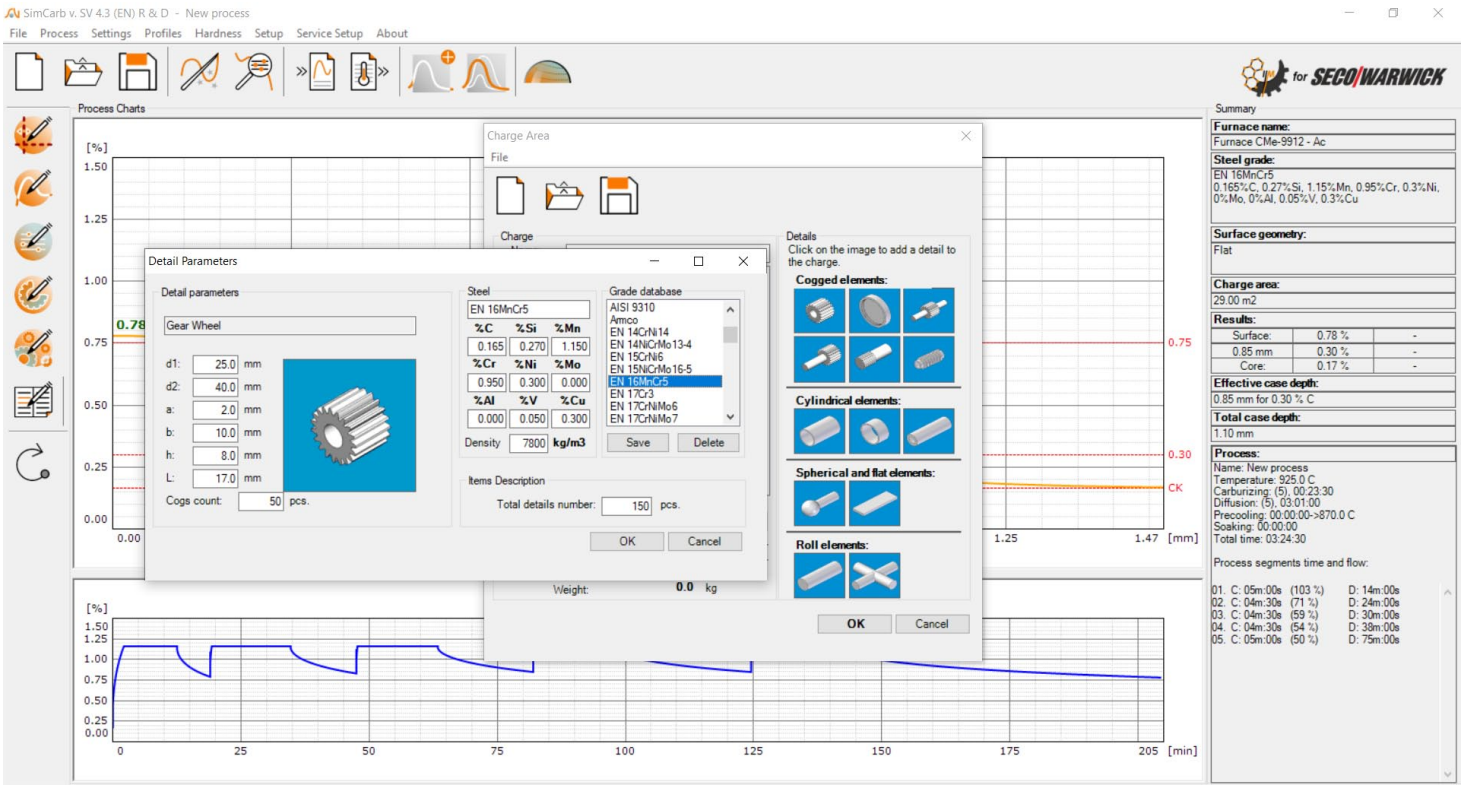
BENEFITS

Optimization of the vacuum carburizing process by:

- Selecting the process temperature,
- Selecting the appropriate number of carburizing and diffusion segments,
- Selecting the appropriate carburizing and diffusion times,
- Selecting the right mixture,
- Calculating the amount of the mixture needed to ensure efficient transfer of atomic carbon to the material.

Significantly reducing the time needed to generate a new recipe.

Reduction of production costs – the software allows you to perform a simulation that will determine the optimal process parameters.



SECO/WARWICK
Invention Meets Reliability

SECO/WARWICK is the 1st choice supplier
of solutions for heat treatment and metallurgy.

We create innovative products that provide our customers with reliable, safe and environmentally friendly solutions for heat treatment and metallurgy and ensure the economic efficiency of their businesses. Expertise includes end-to-end solutions in 5 categories: vacuum heat treatment, atmosphere, and aluminum thermal processing, controlled atmosphere brazing of aluminum heat exchangers and vacuum metallurgy.

SECO/WARWICK Group, with 8 companies located on 3 continents, has customers in nearly 70 countries with more than 4000 deployed solutions. The company provides standard or customized state-of-the-art heat processing and metallurgy equipment and technologies to leading companies in the following industries: automotive, aerospace, electronics, tooling, medical, recycling, energy including nuclear, wind, oil, gas, solar and production of steel, titanium, and aluminum.

SECO/WARWICK

WWW.SECOWARWICK.COM