



coilProduct

Problem:

CSM recommended approach is to finalise the alloy- design and thermo mechanical process in order to obtained target microstructure rather than directly the target product properties (mechanical and dimension). Such approach requires suitable know-how in terms of metallurgical model systems allowing to quantitatively predict microstructure evolution as a function of key process parameters.

Solution:

CSM, thanks to its metallurgical models platform, **microView**, is able to set off-line the operating practices both for hot rolling and cooling.

In particular, CSM's approach predicts:

- Austenite microstructural evolution during hot rolling
- Austenite decomposition during cooling on the run out table
- Residual stress and final geometry

This approach allow the identification of the hot rolling schedules and the Run Out Table cooling pattern.

The integration of in-field measurements devices (pyrometers, thermal maps etc.) and CSM's metallurgical based models, **microView**, allows the on-line control of the coil production process.

The on-line installation of **mechView**, **rotView** and **thermoMap**, which includes the proper automation of the ROT, finally allows to produce at constant quality also the most demanding complex phase steels.



Benefits:

- Cost & timing reduction of new steel grades production
- Full exploitation of hot rolling mill characteristics
- Full coil microstructure prediction
- Standardisation at highest product quality

Input & output:

Present Hot Strip Mill operating practices.

Optimised operating practices for HSM and Run Out Table

