



stripRough

Problem:

The roughness of a surface is traditionally performed by contact devices on specimens in a lab. A small mechanical stylus feeler is used and numerical indices figuring roughness are then computed processing the detected profile. Optical systems have been designed for moving materials, measuring the roughness along the motion direction, with a limitation for anisotropic surfaces (ie rolled steel).

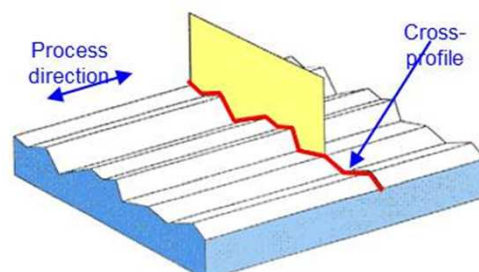
Solution:

stripRough is a new technology to optically detect the profile and to measure roughness across steel surface, even in case of large process speeds.

stripRough scans the strip surface projecting a laser beam; actual angle of each surface micro-element is measured through beam scattering.

Surface is optically scanned in the transversal direction at a very fast rate, while material is running along the process direction.

Auto-focus mechanism allows the device to withstand large variations of working lift (± 5 mm).



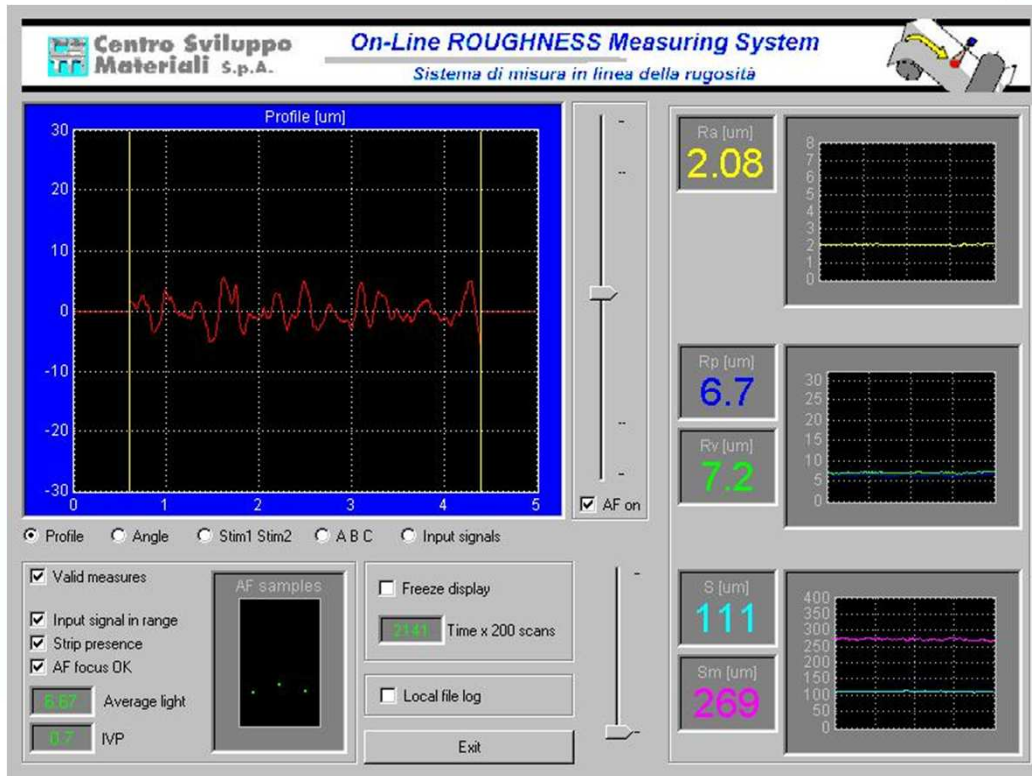
Benefits:

- A powerful on-line device to qualify the production.
- A help for identifying possible origin of defects during hot rolling process.
- Reduction of sampling and analysing costs.
 - Line speed up to 5m/s.
 - Roughness range $0.1 \mu\text{m} \leftrightarrow 20 \mu\text{m}$

Industrial Arrangement:

stripRough is robustly installed along the line.

stripRough includes HW and tailor made SW for storage and data mining.



The new system generation version 2.0 is now available

Fully integrated, no external units, the new measuring head embeds a DSP based processing system provided with analog and serial outputs for immediate measure exploitation and connection.

Overall dimensions: 230 x 230 x 206 mm

