

Ultra high precision hybrid width measurement in slitting lines



Patrick Telders – March 04, 2025

IWCC Legal Disclaimer:

The purpose of this presentation is to guide programs benefiting the copper industry and to provide attendees with information to make independent business decisions.

01

About us

02

Motivation

03

State of the Art

04

A New Solution

04.1 A new solution

04.2 Technical Sketch

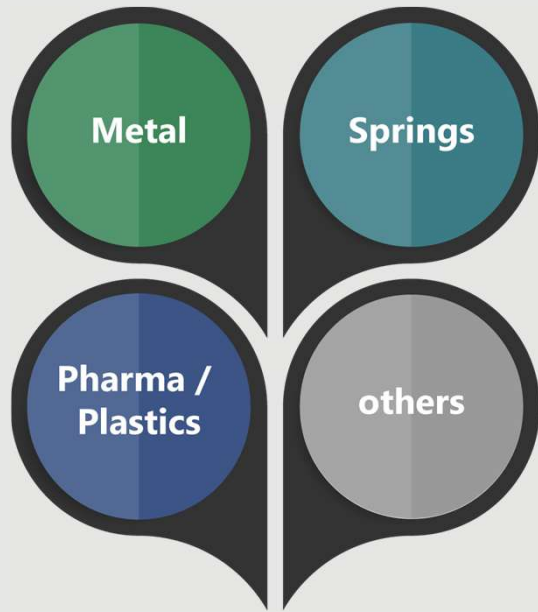
04.3 Advantages

04.4 Installation examples

05

Outlook

Development and Manufacturing of optical Measurement and Test Systems with Camera and Laser



Technical Department



Administration / Sales



Engineering





- In slitting lines the knife setup is crucial
 - Wrong knife setup causes
 - nOK strip width
 - Higher scrap
 - Possible reclamations
 - Dissatisfaction of the customer
 - Tolerances shrink constantly
 - Measurement capability demanded especially for automotive customers
- > Accurate Detection enables efficient production and low oncosts

Manual check of strip width with caliper

Operator moves from strip to strip



Risk of Accident



Highly operator dependent

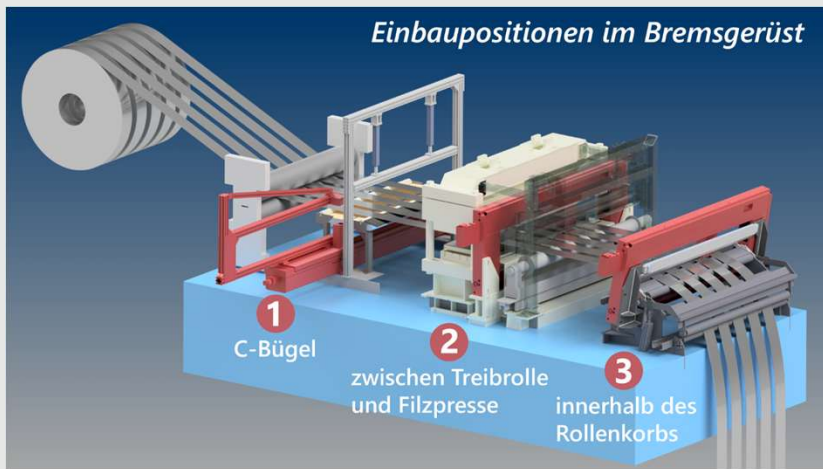


Time consuming



Difficult documentation





Width measurement with an automated camera system:

1

- Automatic reception of production data

2

- Measurement starts automatically once strips are in place

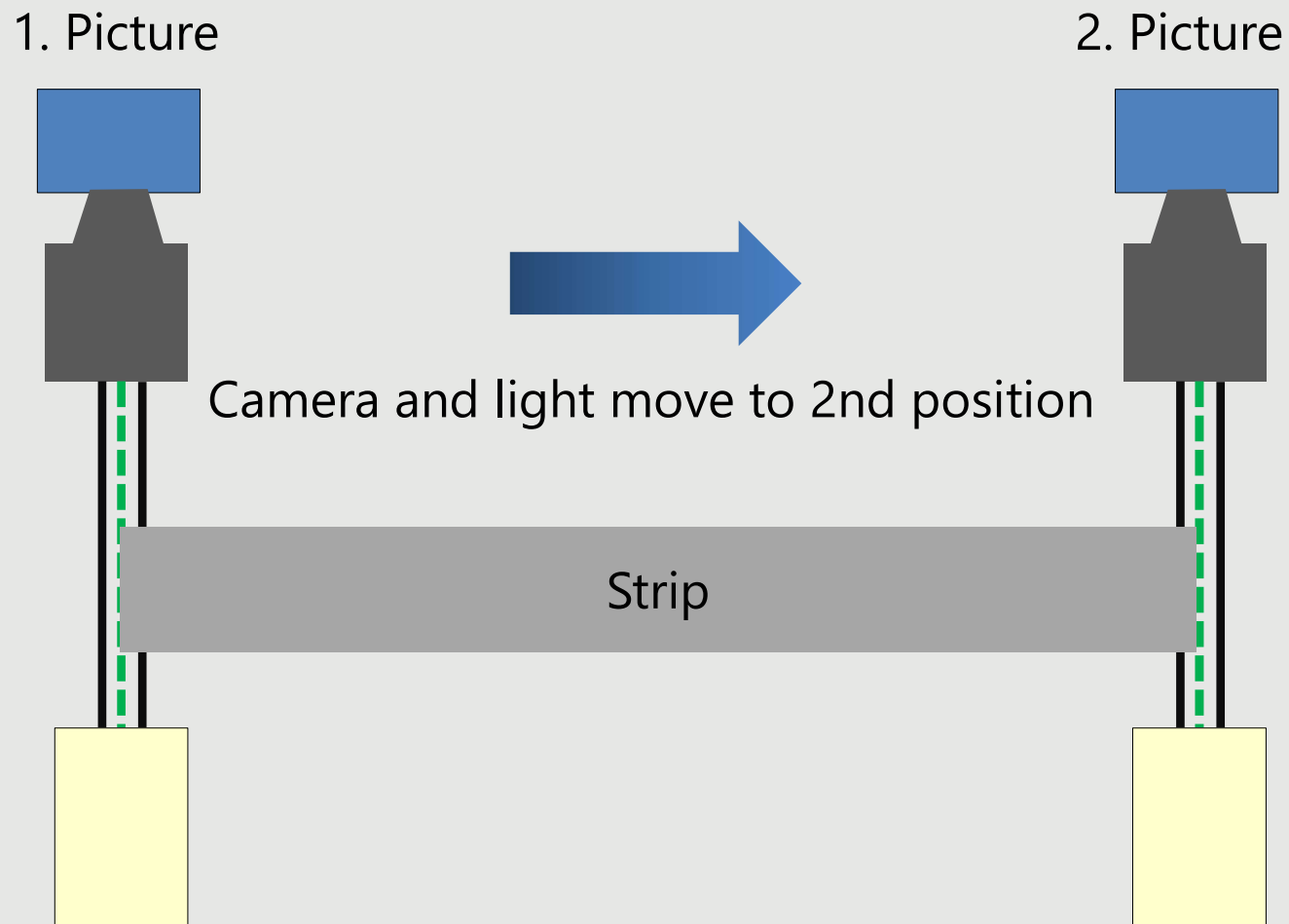
3

- Measure any number of strips within a few seconds

4

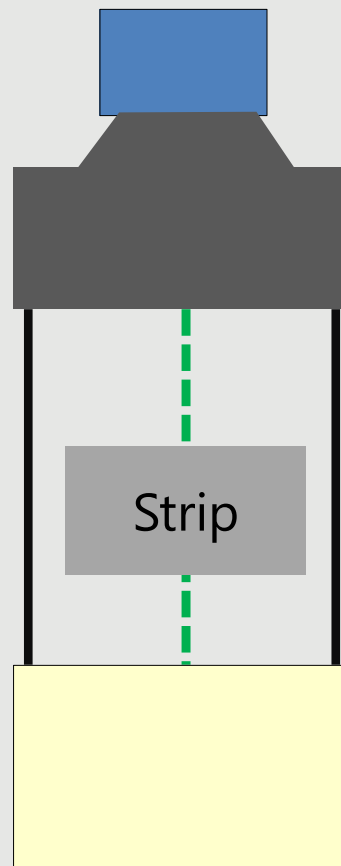
- Results can be exported directly into customer it systems

Offline measurement by traversing over the coil and taking pictures at every strip edge



Inline measurement by traversing from strip to strip (limited strip width possible, typically up to 40 mm)

Measurement in one picture





Operator independent
→ Objective and repeatable results



Contact-free
→ Reducing risk of accident



Ultra high precision due to highres cameras
→ Accuracy from 0.010 mm



Economically efficient
→ Specific remachining

Installation in the roll cage

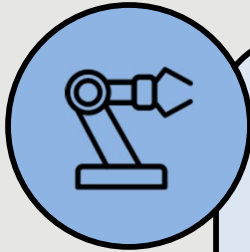


Installation between roll cage and felt brake



Installation as a c-frame





Full inline measurement

- Idea: Two camera solution
- Second axis positions
second camera according
to nominal strip width



Improving accuracy

- With camera and lens
development even better
accuracies might be possible

Thank you very much for
your attention!
Kindly approach me for
any questions.

