

# A Powerful Team

## Bruno Richter Mess-Systeme

and

## Betriebsforschungsinstitut BFI

(The Research Institute of the German Steel Industry)

Um genau zu sein

BRUNO RICHTER



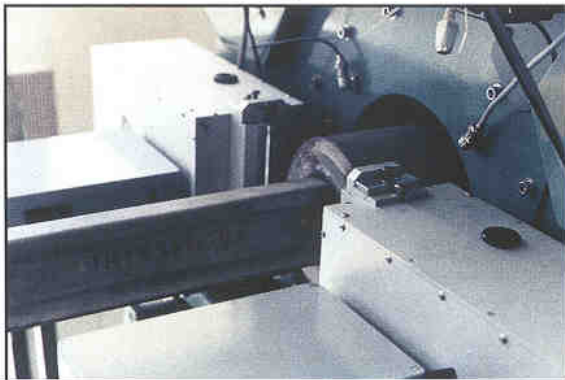
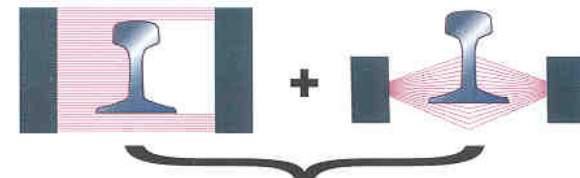
MESS-SYSTEME

### Developed together an advanced system for in-line measuring of complex profiles e.g. H-beams, rails a.s.o..

Shadow measurement

Light section technic

With the combination of shadow measuring with light section technic the advantages of both systems are achieved.



The shadow technic with parallel scanned laser beams has the advantage of measuring the object with high accuracy independent of its position in the measuring field; but only the „outer“ contours like height, breadth a.s.o. can be determined by this method.

The light section technic can establish the „inner“ dimension like web-thickness, depth of H-profiles a.s.o., but the measurement can be very sensitive to the positioning of the profile in the measuring field.

Through a correlation of both technics we get a very accurate profile measure of the „outer“ as well as of the „inner“ dimensions, independent of the temporary profile position in the line.

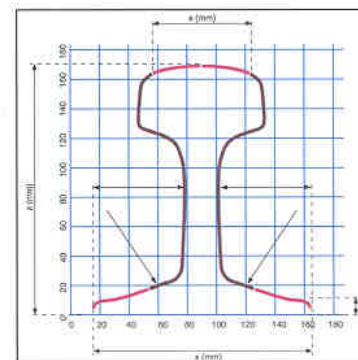
Rail, type UIC 60, as example for a hollow profile.

The Laser-Diameter provides the following dimensions:

- height of the rail
- breadth of the rail foot
- breadth of the rail head
- edge radii

from the light-sectioning measurement, the following values can be taken:

- web thickness
- web symmetry
- head profile with radii
- inclination of the flange-supporting surface



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