

# ONLINE TESTING (ALAT UJI BERJALAN)

## Inline inspection of color codes on treads, width measurement included

*The system TCC 8303.1 marks the running surface which is output after the extruder, inspects the color lines for their completeness and measures the width of the running strip.*

### **Benefits:**

- Integrated detection of the color code and width measurement of running strips
- Detection of missing, wrong or incomplete lines
- High quality marking due to controlling of horizontal position

### **Material parameters:**

- Material width to 550mm
- Material thickness to 50mm
- Material feed to 30m/min



## non-contact inline profile measurement of inner liner material (thickness 1mm to 18mm)



*During the production of inner liner, the thickness profile of inner liner material is measured immediately after the calender using systems of the thicknessCONTROL TIP series. Accurate precision of the non-contact optical system ensures high quality and security of the product produced. Sensors belonging to the thicknessCONTROL RTP series can also be applied for this application.*

### **Material parameters:**

- Material width from 200mm to 3,800mm
- Material feed up to 25m/min
- Permitted material surface temperature max: 100°C

### **Benefits:**

- Permanent high product quality while reducing raw material use
- Fast controlling during warm up or product change due to adaptive traversing speed and high-dynamically measurement
- No consequential costs due to isotopes or X-rays
- Wear-free measurements instead of half time of radiometric tests
- Highest temperature stability due to in-situ calibration and compensation elements
- Customer-specific adjustable interface

## Non-contact inline profile measurement of tread strips (thickness <math><1\text{mm}</math> to 18mm)



*The profilometer of the thicknessCONTROL.TTP series accurately measures the thickness profile of tire tread or side walls during the extrusion process and enable therefore an efficient control during production as well as a fully recorded quality control.*

### **Material parameters:**

- Material width to 2,000mm
- Strip width from 5mm to 550mm
- Up to 6 single strips
- Material feed up to 60m/min

### **Benefits:**

- Optimizing the material use and quality
- Fast controlling during warm up or product change due to adaptive traversing speed and high-dynamically measurement
- No consequential costs due to isotopes or X-rays
- Wear-free measurements instead of half time of radiometric tests
- Easy integration to already existing lines
- Customer-specific adjustable interface

## Non-contact offline profile thickness measurement of tread strips and side wall material



*The profilometer thicknessCONTROL TTP 8302.T is applied for sampling regarding the extrusion process of treads, side wall and inner liner material. The system offers measuring results in high precision and allows therefore an efficient production as well as a fully recorded quality control.*

### **Material parameters:**

- Material width to 600mm
- Material thickness to 50mm

### **Benefits:**

- Manual measurements which are prone to error are replaced and quality control is optimized
- More efficient, manual setting of the extrusion nozzle reduces consumption of material
- No consequential costs due to isotopes or X-rays
- Wear-free measurements instead of half time of radiometric tests
- Statistical documentation and permanent improvement of the production process
- Economical solution to control various lines by one system

## Non-contact inline length measurement of tread strips



*For tire production, tread strips are cut from the extruded strip material. The system TLS 8303.I is applied in the extrusion line to measure the length of the strips immediately after the cutting machine in order to ensure a secure production process in high quality.*

### **Material parameters:**

- Strips lengths from 1,500mm to 2,500mm
- Feed rate to 2m/s

### **Benefits:**

- Optimizing the material use and quality
- Geometrically independent comparison of cutting edges
- Easy integration to already existing lines
- Customer-specific adjustable interface