

FACTS, Inc.

A system to detect missing or paired wire cords and provide wire cord spacing information

The **FACTS' Vision System** is designed to detect missing cords as well as provide cord spacing information.

It examines the cord just before entering the calender nip. This is based on a 4 Z Roll Calender configuration that has a pressure roll, typically grooved, that seats the wire in the lower gum wall on the No. 3 roll. The cameras look at the wire against the black rubber background on the #3 roll between the pressure roll and the 2:3 roll nip.

The system provides continuous monitoring, reporting and alarming of:

- Cord spacing
- Missing cord detection
- Number of cords
- Crossed or paired cords

Each product code or recipe specifies the proper cord spacing, number of cords, etc. The system reports the position of any defects. The position information may then be used to mark the defect at the post-calender cooling drums.

The system detects a missing cord or improper cord spacing within 3 to 4 inches in the machine direction of when it occurs at 60 yards per minute. The average is less than a 2-inch delay.



Calender Control Solutions Vision System



System Architecture—typical

- 2 high resolution line scan CCD cameras arranged across the web
- 62" Red LED solid state high reliability light source for lighting
- 2 frame grabbers, operating concurrently
- 50" stand off from roll frame
- High-speed Windows XP Pro computer for processing data and for HMI (operator interface) control
- 17-inch touch screen HMI

FACTS corporate profile

FACTS Inc. is a leader in providing 'state-of-the-art' process control and measurement systems for the rubber industry.

Founded in 1992, **FACTS** offers total measurement and control solutions for the rubber and plastics industries. **FACTS** specializes in providing systems for the mixing, calendering, and extrusion processes.

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