When you have a company with 100 years of innovative work behind you, you have a measurement system that puts the leading edge of tire finishing technology in front of you. Micro-Poise®. Better by every measure.

Coll-Tech X-Ray ADR

Coll-Tech X-Ray ADR is the cornerstone product of the Micro-Poise® family of X-Ray image inspection and Automatic Defect Recognition (ADR) toolbox modules. The Coll-Tech X-Ray ADR is the only ADR system capable of multiple layer recognition for up to three breaker layers in addition to the ply. The product detects, tracks, and separates each wire in any tire layer and calculates tire metrics in three dimensions.

- Coll-Tech X-Ray ADR is the fastest product commercially available. Coll-Tech X-Ray ADR automatically detects anomalies viewed from X-Ray images on all tires and all areas of the tire. It automatically recognizes tire areas, angles and distances independent of tire type.
- Coll-Tech X-Ray ADR is the featured inspection and defect recognition system on all Micro-Poise® X-Ray machines. Coll-Tech X-Ray ADR is also available for use with other X-Ray imaging systems.

The base product is fully capable of detecting bead disorders, off center breakers, body ply arrangements such as open or touching wires, and foreign objects. Coll-Tech X-Ray ADR measures actual values. This allows the operator to set warning limits with configurable error tolerances.

For radial passenger, truck & bus tires, rely on Coll-Tech - the Power of Precision.
Coll-Tech X-Ray ADR Provides:

Coll-Tech X-Ray ADR is a necessary solution for every tire manufacturer who wants to assure that only the best radial tires, whether they are passenger tires, truck and bus tires or over-the-road tires, are shipped to their customers.

- The Viewer with Error viewing - this lets the operator quickly view any specific anomalies found by the Coll-Tech X-Ray ADR software.
- Communication with the X-Ray machine and operations PLC. Coll-Tech X-Ray ADR is capable of operating with all Micro-Poise® X-Ray machines and other third party X-Ray machines through its communications module.
- User configuration menus - this allows the operator to set tolerances and appearance.
- Tire Database and Recipe Management. Historical information can be collected and statistical data analysis is available.

The Coll-Tech toolbox is designed to meet tire manufacturing requirements for a thoroughly inspected radial passenger tire, or radial truck and bus tire. Measurement and inspection modes focus on the following tire construction components.

### Breaker
- Automatic detection, missing layer detection, wire disorder detection, wire spacing, wire count, wire angle and wire density.

### Ply-Turn-Up
- Distance to bead, edge disorder, wire spacing, wire count, wire angle and wire density.

### Chafers
- Automatic detection, edge disorder, wire spacing, wire count, wire angle and wire density.

### Bead
- Bead auto-detection, bead width disorder, distance chafers to bead.

### Areas Centering and Alignment
- Detection of the tire real center using rubber profile, breaker layers alignment, chafers alignment with respect to bead, distance of ply turn up with respect to bead, and shift of breaker areas from nominal position.

The Coll-Tech X-Ray ADR system enhances the overall reliability of any radial tire production line. Consistent analysis of intricate X-Ray views improves quality assurance for the radial tire manufacturer. Quick and efficient analysis through Coll-Tech X-Ray ADR minimizes operator oversights and improves overall tire testing cycle time.

### Layout Options

Coll-Tech X-Ray ADR runs on a Windows® based industrial machine controller and communicates directly with any X-Ray system.
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- **Breaker**
  - Automatic detection, missing layer detection, wire disorder detection, wire spacing, wire count, wire angle and wire density.
- **Ply-Turn-Up**
  - Distance to bead, edge disorder, wire spacing, wire count, wire angle and wire density.
- **Chafer**
  - Automatic detection, edge disorder, wire spacing, wire count, wire angle and wire density.
- **Bead**
  - Bead auto-detection, bead width disorder, distance chafer to bead.
- **Ply**
  - Ply auto-detection, Ply wire spacing, S-shaped anomaly detection, wire angle disorder, cross wire detection, broken wire detection, wire density, wire counting and foreign object detection.
- **Areas Centering and Alignment**
  - Detection of the tire real center using rubber profile, breaker layers alignment, chafer alignment with respect to bead, distance of ply turn up with respect to bead, and shift of breaker areas from nominal position.

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