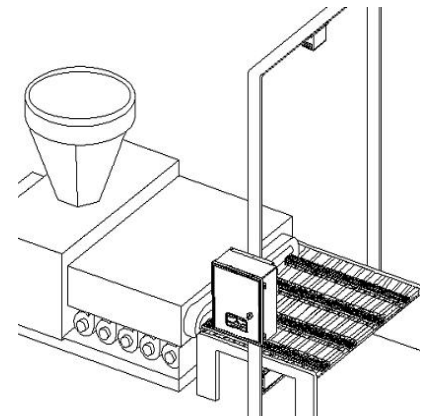


Sidewall Extrusion Width Monitoring

Problem

Sidewall extrusion material that is not within specifications may result in scrap or defective tires. When sidewall extrusions become out-of-spec, is it the result of:

- **Improper die or die adjustment?**
- **Foreign material in the die?**
- **Problems in extruder feed?**
- **Temperature control malfunction?**
- **Line tension malfunction or mis-adjustment?**
- **Compounding problems?**



Multi-Strip Extrusion Width Monitoring System

In addition to the challenges that exist in the production of in-spec sidewall extrusion material, the personnel responsible for the extrusion products also face the need to document extrusion measurements in order to meet traceability requirements.

SCAN-A-LINE™ Solutions

The early detection of defects in sidewall extrusion permits rapid correction of problems. When a problem is detected, the sidewall extrusion process can be adjusted to bring the product back into specification. The defective extrusion is removed from the tire building process before it is used in the production of defective or blemished tires. If the profile die is properly set up, the foregoing extruder problems result in variations of sidewall extrusion width. As a predictive maintenance tool, SCAN-A-LINE™ Width Measurement Systems (WM Systems) can monitor the extrusions and alert for out-of-spec product; even in some applications requiring the simultaneous monitoring of multiple extrusions.

While performing this function, the WM System can also be used for feedback control of extruded width and for better control of basis weight (compared to the control obtained by the use of scales). Sidewall size can be measured hot and cold to quantify and document cooling shrink-down. Cooling shrink-down is variable with compound changes, variations in cooling rate, and problems with the transportation system. Monitoring of extruded sidewall size can also result in more efficient extruder start-up.

Because the SCAN-A-LINE™ WM System readily interfaces with most computers, PLCs and data recorders, the system can supply measurement data necessary for documentation of sidewall extrusion characteristics. Such documentation for statistical process control (SPC) purposes, product certification and traceability records fulfills the requirements of the modern global marketplace.



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