

ÖLFLEX® for high-tech tyres from Continental

By- LAPP

Car tyres are required to meet the highest of safety standards. They need to be able to cushion and absorb, to ensure directional stability, have smooth running characteristics and a long life, as well as be able to transmit power in longitudinal and transverse directions. Manufacturing such high-tech products is a core competence of Germany's Continental concern. With its headquarters in Hanover, the company is Europe's leading tyre manufacturer. One of the concern's largest production plants in Europe is located in Korbach in Hessen, where 34,000 car, SUV and van tyres are manufactured each day. And for many of its production lines, Continental has placed its trust in the reliable cable and connection technology of Stuttgart's Lapp Group. For example, with the "Internal mixer 8", launched in December of last year. Here, raw materials are mixed, rolled, cooled, mixed again and rolled; a process varied according to the type of tyre and component until the desired material property has been achieved. After all, such a high-tech tyre comprises more than 12 different rubber compounds. The internal mixer produces 60 to 90 tons of sheet daily as part of a multi-stage mixing procedure.

These are the basic elements for every tyre. The system stretches across four floors and is controlled by a single employee. The cable harnesses used are routed under the ceiling in cable trays. Responsible for



the wiring was Bernd Emde from the Electrical Installation department at Continental. "We used almost exclusively Lapp cables. We were particularly impressed by the high quality of Lapp's products, not to mention the superb service from a single source." A feeding conveyor and several pipes or hoses transport the raw materials to the mixer. Safe transport using energy supply chains is guaranteed by the ÖLFLEX® FD CLASSIC 810 P cables. As oils are also mixed here, the highly oil-resistant ÖLFLEX® 191 connection and control cable is used. Next stop is the mixer, before the plastic material produced in the mixer continues on to the extruder. Using two extruder screws and a calender (rolling system), the extruder rolls out the sheet. This demands a particularly high performance, which is why the varied ÖLFLEX® CLASSIC 100 CY connection and control cable with a cross-section of 95 mm is used as a supply line for the extruder. Serving as a connection to the movable calender and also connected to the frequency converter is the ÖLFLEX® FD 90 CY drag chain cable with its tin-coated copper screen braiding. A transition belt transports the sheet from the calender to the rubber sheet cooling system. The task of controlling the motors falls to the ÖLFLEX® CLASSIC 110 connection and control cables. The sensors and actuators are supplied by UNITRONIC® BUS PB FD PA cables. At the end, the belt "spits out" the accordion-shaped sheet. Before the

finished sheet is released for further processing and finally used on the tyres, a quality check is carried out.



Samples are tested online and approved for further processing. While we are on the subject: In order for Lapp to be able to process the orders from Continental faster and with less complication, all Lapp brand products will now be included in Continental's electronic catalogue CEOS (Continental Electronic Ordering System). Miguel Bouza-Behm, Sales Engineer at U.I. Lapp GmbH and Dejana Zarkovic from In-House Services will also be on hand to provide customer support. Thus relieving Continental's Purchasing department of its "middle man" duties in the future.