

FA 08 The wire sector and “Industry 4.0”

The wire, cable and wire-processing industry and the wire 2018 trade fair

Wire and the resulting products are essential to the functioning of technical systems. This is why they are used on such a universal scale. Wire products are also vital elements in “Industry 4.0”, a term which is frequently used in the media – the digital connection between production and IT technologies.

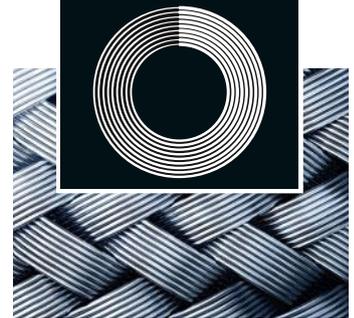
The wireless sector and its suppliers play a pioneering role in this area. The central purpose of Industry 4.0 is to send and process large volumes of data at a high speed. This is to optimise criteria such as cost, energy and resource efficiency and flexibility and thus to increase the competitiveness of an enterprise. It also includes digital networking across corporate boundaries.

Industry 4.0 is based on the increasingly intensive use of electronics, a development which started around 1970 and which would have been unthinkable without the wire sector and its suppliers. Companies soon started to use electronic technologies such as data processing, CNC, CA and CI. These are now vital components of everyday life in industry. In the 1990s, however, a further boost came from the internet and its numerous applications, causing profound changes in our working environments.

But it is in fact the companies in the wire sector that make the products which are so indispensable for electronic techniques. We only need to remind ourselves of cables, conductors and above all fibre optics which can convey large volumes of digitised data within a short period of time. Suppliers, particularly manufacturers of wire and cable machinery and – later – also software companies have developed systems which can be regarded as essential to the development of Industry 4.0. In the 1960s a number of machine manufacturers started to combine stand-alone machines into centrally controlled production facilities which were eventually followed by automated solutions. In 1988 the German trade magazine *Draht* (“Wire”) presented an idea from Maschinenfabrik

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Niehoff on the computer-assisted manufacturing of wire, linking the process level with the group control level and allowing connectivity with the plant and corporate management levels. Software applications were developed whereby production data could be recorded, analysed and graphically mapped.

The internet opened the way to the remote control, monitoring and maintenance of plants and machinery. Today's software companies provide manufacturing execution systems (MES) which combine and process a variety of data flows. This makes it possible, for instance, to optimise the use of energy and raw materials and thus to leverage major potential cost savings. It also allows companies to make the best use of their production facilities, to respond swiftly to customer demands and to changes in their order situation and indeed to keep their stocks at a low level. Furthermore, it shortens both development and delivery times. All this shows that the wire sector has already implemented many of the ideas of Industry 4.0.

The wire 2018 trade fair

Information about state-of-the-art manufacturing technology and trends in the wire, cable and wire-processing industries can be obtained every two years at *wire* – the world's number one trade fair of the wire and cable industry, an event which has been established in Düsseldorf for over 30 years now.

The next wire will be held at Düsseldorf Fairgrounds from 16 to 20 April 2018.

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