

7.3 Industry 4.0 – Safety first

Industry 4.0, IoT, 5G: The smart factory is a reality. But, with hot spots now inside the factory, what are the dangers that employees are exposed to?

The so-called fourth industrial revolution is promised by this new generation of self-organized production. But it also means that unprecedented quantities of hot spots, base stations and communications equipment are present on the factory floor. This immediately prompts employees and work councils to ask about the levels of exposure to the resulting electromagnetic fields. And responsible employers naturally want to provide a safe working environment for their staff.



Already, the safety of many industrial processes are being examined from the point of view of the electromagnetic fields that they generate. Such examination is obligatory in Europe in line with the [EMF Directive 2013/35/EU](#). Welding, tempering, and smelting are some examples of processes that generate strong electromagnetic fields which need assessment. Most of these applications operate in the low frequency range. For instance, the exposure from welding equipment is ideally measured using the [Narda ELT-400 Low Frequency Meter](#) directly as a percentage of the standard. It couldn't be simpler.

Communications within a smart factory take place in the high frequency range. A high frequency measuring device like the [Narda Broadband Meter NBM](#) is ideal for IoT or 5G. Demonstrating compliance with limit values is child's play with probes for up to **90 GHz**, optionally with so-called [shaped probes](#), which directly measure the percentage of the standard just like the [ELT](#). To match this, Narda offers [packages](#) for measurement service providers or health and safety representatives that cover both the low and high frequency ranges. Roll on Industry 4.0! With Narda test equipment, you'll always be on the safe side.

