

New vision in the extrusion quality monitoring of HV cables

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Advances in calibrated ultrasonic measurement technology has led to the development of a fast scanning high-fidelity measurement system that has now been deployed on several production lines internationally over the last two years, spanning both VCV and CCV production line technologies.

Such measurement equipment is now capable of presenting the true nature of the process derived features and variations that occur within the structure of a multilayer extruded HV cable. This new information provides a fresh insight into the manner in which cable layer structures - and associated measures like concentricity - actually vary along the whole of the cable length, and perhaps challenge some pre-conceived ideas about the stability of the extrusion process based on short sample length investigations.

This paper will present exemplars of such measured variations and explore how these newly quantifiable cable characteristics impact both on potential techniques for the monitoring of the quality of such extrusion processes, and on how the measurement to Standards such as IEC 60840 is implemented in practice.