Strong Together

17/02/2025 Why quality in battery cell production needs to be rethought.

Battery electric vehicles are well on the way to becoming the primary drive technology in the automotive sector. Based on analyses by Porsche Consulting, the current global annual demand for batteries will rise from its current level of around 1.5 terawatt hours (TWh) to over 7.5 TWh by 2035. This increasingly directs the focus towards the cost aspects of high-voltage battery production. Quality assurance is tasked with stabilising the complex production process and thus safeguarding the technical requirements of the product. Scrap rates of up to 90 percent during the ramp-up phase and exceeding 30 percent at the start of production are not uncommon. Even after several years of production in a steady state, scrap rates still lie between five percent and 12 percent. For comparison: In the automotive sector, scrap is usually measured in ppm (parts per million). Due to the high proportion of material costs in the region of 70 percent, ensuring production quality is a key cost lever. Therefore, industry-leading quality approaches that ensure a stable production ramp-up are crucial to gain an advantage in this highly competitive environment.

Read the impulse in full length: Strong Together

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