

NEW PROCESS: COATING REPLACES FOILING OF BATTERY CELLS

The battery cell is the heart of any electric car. More and more German car makers produce their own battery cells - a decision that, among other things, improves their environmental balance. There have been significant efforts to further optimize battery cell production. Venjakob is now con-tributing its own expertise and innovative ideas to this process. The family-owned machine engi-neering specialist has developed a fully automatic plant solution for a German premium car manu-facturer, intended for coating battery cells of different formats in through-feed operation.



THE REQUIREMENTS



Battery cells that are used in electric vehicles are usually covered with a protective film. A laborious and costly process. As an alternative to this, there is now a special UV-Coating that protects the sensitive cell modules just as well.For this new type of coating, our engineers have developed a fully automatic system solution on behalf of the customer. Here, prismatic cell modules in various formats can be coated contactless in a continuous process. As a result, the entire production process for battery cell manufacture could be accelerated and costs reduced.

Innovation in conveyor technology without the workpiece carrier. In the former coating process, to prevent the terminals of the cell modules as well as

the degassing valve, DMC code and the sides being coated with overspray, the battery cells were placed upside down in the workpiece carrier. Unfavorable here: The entire carrier was also coated and had to be cleaned of the special paint with each new batch. Our solution was to place the cell modules directly on a suitably modified belt strap. The cell modules can be placed close to each other so that the terminals and corresponding areas stay protected from overspray during the entire coating process.

ADVANTAGES AT A GLANCE

- No workpiece carriers
- Increased production speed conveying is continuous within a time window of 10 to 13 minutes
- Three battery cell formats can be coated without having to convert the system No handling, turning, or gripping
- No damage to the battery cells

- Paint recovery during coating reduces paint consumption
- No use of robots instead permanently installed spray Guns that apply continuous operation
- Ease of maintenance: All system components' that are important for maintenance and replacement, are easily accessible or mounted on rollers or on for easy extension

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