

New technical centre for powder coating strengthens Karl Bubenhofer's market position

The family-owned company Karl Bubenhofer AG has upgraded its technical centre for powder coating in Gossau and invested in a new high-tech powder coating plant, which is the only one of its kind in the industry. With state-of-the-art application equipment and flexible curing options, the company can carry out practical coating tests, evaluate newly developed products and provide high-quality training.



At the former powder coating plant of Karl Bubenhofer AG real tests of coating processes were limited. For this reason, the family-owned company invested in a modern powder coating system at its site in Gossau. The new powder coating plant is designed and developed for their specific requirements and is equipped for all types of automatic and manual powder coating application processes.



High-tech solution

The new plant, which was supplied by the application system manufacturer J. WAGNER GmbH, meets all of the company's needs. The spacious plastic spray booth is fitted with the latest type of recovery system. Three automatic spray guns on reciprocators are arranged vertically on each side of the booth. If necessary, this can be increased to five guns on each side. A light curtain detects the size of the parts to be coated and adjusts the movements of the guns accordingly. The application system, conveyor and batch oven can be controlled from a central location by touch screens.

The powder is supplied by a semi-automated powder centre with an integrated control system and an ultrasonic sieve which all the new and recycled powder passes through. The interior of the powder centre is made from chrome steel and this ensures that the frequent cleaning processes needed in the technical centre can be carried out quickly and without leaving any powder residues. The closed circuit system allows the experts at Karl Bubenhofer AG to obtain reliable information about the behaviour of standard products and of high-tech bonded metallic powder coatings.

As well as being equipped with the latest application and control systems, the new plant is also highly energy efficient. A cleverly designed exhaust air ducting system and a cyclone with an optimised air flow allow the use of a compact extraction filter with very low energy consumption.

The plant is ideally suited for practical user training. From the central control module, the course participants can follow the settings made by the engineers in the lab in real time and evaluate their impact on the final coating, which makes the learning process more effective.

Special equipment for coating heat-sensitive substrates

The markets for alternative and heat-sensitive materials are becoming increasingly important for Karl Bubenhofer AG. These include plastics and, in particular, wood. The new coating plant is fitted with counter-electrodes and a software system that allows high-quality coating tests to be carried out on components made from MDF, which is used in furniture production for example, and other types of materials.

The curing oven has been specially designed to specifications drawn up by the engineers at Karl Bubenhofer AG. The coated parts are transported directly from the booth to the batch oven, where the powder coating is cross-linked using medium-wave infrared emitters. The heaters can be replaced with long-wave infrared emitters or UV lamps, if necessary. In addition, the oven can operate in air recirculation mode or in combined mode. An integrated infrared camera



analyses and documents the cross-linking process. The flexibility of the plant allows the development engineers to control the cross-link procedure and test all types of powder coatings including the result logging.

Investing in a successful future

The newly installed plant in the technical centre belonging to Karl Bubenhofer AG functions both as a practical training facility and as a test lab for the development of new products. The plant's modern technology allows powder coating systems to be cross-linked under ideal conditions. As a result, the engineers can carry out practical tests of their newly developed products and in-depth evaluations of the behaviour of powder coatings in automated systems in order to improve their quality even further. At the same time, existing and potential customers can benefit from high-quality training using the latest application technology. The amount of preparation and cleaning involved has been significantly reduced, which allows more tests to be completed in a short time and leads to higher quality results.

The newly modernised powder coating technical centre at Karl Bubenhofer AG is unique. The family-owned company has made a major investment in its future success and a clear commitment to the production site in Arnegg (Switzerland).