

Modular Material Processing

Standardized Automation Solution for Processing Plants

A modular automation concept - continuous across the entire product spectrum - is currently being implemented by MANN+HUMMEL Pro Tec in partnership with Siemens. Core elements for the new convenient standard in drying, conveying and dosing of plastic granules are a new compact controller and HMI devices of the SIMATIC range

MANN+HUMMEL ProTec is a system house for virtually all material processing tasks that was formed of the three specialized companies SOMOS (Weiterstadt - drying), MANN+HUMMEL (Ludwigsburg - conveying/transporting) and Vollmar (Königswinter - dosing/mixing). In order to unify the growing automation environment of the three branches and to bring it to a future-proof level, a modular and thus flexible solution was sought. This solution was to satisfy the different requirements of the three branches and their product spectrums. On the basis of largely standardized control hardware and one-time software developments (such as a temperature controller), the configuration, construction, control and visualization of individual assemblies as well as complex customer-specific plants - with a variable number of drying containers, dosing systems and conveying devices - was to be achieved without great effort. Finally, MANN+HUMMEL ProTec - as a system supplier - wanted to offer a continuous and worldwide accepted system controller.

Component System of the Siemens Spectrum.

Following intense internal discussions, Pro Tec chose a modular solution of the diversified Siemens spectrum: The core component of all devices will soon be the new compact controller SIMATIC S7- 300C, available in scaleable performance levels and, optionally, with a PROFIBUS-DP interface for the connection of decentralized components.

The convenient standard for controlling and monitoring conveyor installations will be the SIMATIC Touch Panel TP 170. For the more complex mixing and dosing systems, the Operator Panel OP 170B and the Multi Panel MP 270 are specified as two higher performance alternatives. Up to seven of the above HMI devices (in the Pro Tec design) can be connected to one controller at distances of up to 300 m, which is often required for the vast production facilities. For the connection of decentralized periphery, the ET200L-SC will be employed throughout. For the SOMOS dryers, Siemens is currently developing an economical and compact special module.

Support in any Situation

"In the transfer of the previous concepts to the new platform, Siemens provided valuable assistance, without which a justifiable time frame could not be adhered to", says Achim H. Becker, manager of the MANN+HUMMEL ProTec factory in Weiterstadt. "The continuous software development tools STEP 7, ProTool and SCL of the SIMATIC world also contribute to the swift construction of our component system and its efficient use." It is also not a problem to implement high-level language routines and to protect them against unwanted access for safeguarding specific know-how. Another argument in favor of Siemens was its global presence and acceptance by the users, who are familiar with the proven technology of the world market leader and thus do not require much training.



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