Oerlikon and Siemens, both global leaders in technology, have developed a close and successful partnership, in particular in the field of textile machine and plant construction. Starting off as a simple product supplier, Siemens has since become a valuable strategic partner – a fact underlined by Oerlikon’s presentation of a partnership award to Siemens in the supplier-integration category.

The Swiss group Oerlikon develops various turnkey solutions for solar modules made from thin-layer silicon, protective coatings for precision tools and components, vacuum generation and process gas conveyance systems, textile machines and plants, and drive technology. The company is also involved in aerospace technology and production systems for nanotechnology applications.

Oerlikon’s business relations with Siemens are long-standing: from a simple product supplier for motors and controls, Siemens has developed into a strategic global partner playing an essential role in the processes in place at Oerlikon. The collaboration is particularly strong with the two business units in the textiles segment – Oerlikon Barmag, specializing in filament yarn plants and texturing systems, and Oerlikon Neumag, the equivalent for staple fiber, nonwovens, and carpet yarn plants.
Integrated concept for winding machine

In 2000, Oerlikon Neumag abandoned its original automation concept with different suppliers and implemented the first integrated production concept based on the core components of Simatic S7-400, Simatic WinCC, converters for the Masterdrives series, and Siemens motors. Beginning in 2004, the groups worked together to develop an entirely new integrated control, drive, and networking concept for the WINGS POY winding machine for partly oriented yarn (POY), currently the leading technological solution worldwide. WINGS (Winding INtegrated Godet Solution) represents an innovative approach that develops new possibilities for even more efficient and economical POY production.

To remain competitive, some tailor-made and some modified standard products were adopted in implementing the current WINGS POY system. In this way, Siemens and Oerlikon developed customer-specific modules in numerous projects, including an optimized input/output module, an intermediate circuit precharge, and an excess rotation speed control. The Sinamics S120 modular drives were also issued in a special Oerlikon format. At the same time, the Siemens Chemnitz Werk für Kombinationstechnik plant (WKC) optimized the design and production of the series control cabinets. The results are the extensive pre-cabling of modules and their demand-driven, synchronous supply in control cabinet assembly. For specific components, Siemens developed individual quick-assembly ribbon cables as a cost-efficient alternative to individual manual cabling.

Furthermore, the partners established a concept for demand-based logistics: control cabinet production at WKC is integrated into the Oerlikon production planning and control system. This facilitates the optimized on-time delivery of several thousand control cabinets every year in the Oerlikon Barmag production facility in Remscheid.

Twice a week, the textile machine manufacturer receives tested control cabinets with top-quality switch functions so that no specialized electrical personnel are required for final e-technology inspections or revisions for the final assembly in the winding head production.

And it continues

With its comprehensive product portfolio and its solution expertise, Siemens has become a valuable key supplier for Oerlikon and is involved in further development projects. The automation concept of the WINGS POY system has thus successfully been extended to other types of winding heads. The partnership award presented to Siemens at the Oerlikon Supplier Day in November 2011 provides recognition of the services already rendered and motivation for the future. During the event held at the Oerlikon head office in Pfäffikon, the future goals of the partnership were also defined.