Impressions of the preassembly phase and comments by the project managers.
Preassembly of aluminium hot rolling mill stand completed and milestone reached on the way towards a running plant.

- In the phase of preassembly a complex, meticulously planned and tightly timed wheelwork is interacting.
- For this crucial milestone on the way towards a running plant it is essential to know and also master the entire process of manufacturing and assembly.

At the end of May 2019, the preassembly of several hot rolling mill stands for aluminium, dedicated to one of our long-standing customers, was completed. This was an essential milestone being achieved in the Hilchenbach workshop and the basis for smooth commissioning was established.

SMS group newsletter takes the opportunity of the preassembled mill stands to have a close look on this essential milestone on the path towards a running mill. Because until that happens, a complex and tightly timed clockwork is running. Sebastian Böcking and Ingo Meier explain in the interview, what matters.

Jonas Langenbach (left) and Torsten Marburger (right) from the large component assembly department dismantle the work roll change guides.
“A neat shop floor and quality data collection is indispensable in the digital age.”
Ingo Meier, Head of Large Component Assembly in the Hilchenbach workshop.

“Also part of the technical highlights of the finishing mill are the much elaborated roll cooling system and the strip cooling system.”
Sebastian Böcking, Project Manager of Aluminium Hot Rolling Mills at the Hilchenbach location.

Sebastian Böcking is project manager in the aluminium hot rolling mills department located in Hilchenbach, where the mechanical design of the finishing mill was also created and where the core components of the plan have been manufactured. The latter include mill stands, hydraulic adjustment systems, CVC®plus systems for roll shifting, drive systems, mill stand platforms provided with machinery piping and hydraulic controls.

Sebastian Böcking explains: “Profile and flatness control are the two technology packages to be highlighted, providing a significant influence on the strip quality. In the profile and flatness control CVC®plus, work roll bending and work roll cooling interact, while the thickness control is affected by the hydraulic adjustment systems. Also part of the technical highlights of the finishing mill are the much elaborated roll cooling system and the strip cooling system, extending over wide areas of the plant. The strip cooling system comprises the transfer bar cooling as well as cooling equipment being integrated in the interstand areas.”

Ingo Meier is head of the department large component assembly in the workshop in Hilchenbach. He says: “Because of the high requirements on the final products to be produced on our plants it is very important to know and to master the entire manufacturing process. Only through this it is possible to secure the tight tolerance requirements of our products for the mostly close appointments. Likewise a clean shop floor and quality data collection is indispensable in the digital age. Considering that in recent years we have sensitized our employees.”

After the mill stands have been assembled and the quality and functional tests have been successfully completed, they will be demounted to competent size in order to be packed, loaded and shipped after a surface treatment. Because the Hilchenbach workshop is provided with a factory-owned railway siding, the mill stands will be directly loaded by an overhead crane on a heavy duty wagon and will be carried to the harbor. At the site final assembly and commissioning will take place. In the spring of 2020, production is scheduled to commence.
The new finishing mill consists of several mill stands and will expand the existing hot rolling mill of our customer. Each of the new stands will be provided with the CVC® plus technology. By this the flexibility required is ensured in order to produce a demanding range of high-grade products. The aluminium hot strip is dedicated to manifold industrial applications, among them there are also applications for automotive and shipbuilding industries. To ensure the required top strip quality, in addition to the excellent mechanical equipment there is also the highly developed X-Pact® automation available. Because commissioning of the automation system should work out efficiently on site, in parallel to the shipment preparations of the rolling stands, the Plug & Work integration test is being prepared in the test field in Hilchenbach.