

Profile Professionals

At Stabio, left of the highway E 35 heading to Italy, Michael and Wolfgang Stumm roll and weld the future at their company Montanstahl.

■ Mountains, chocolate, banks—typical answers to the question “What comes to mind when you think of Switzerland?” Admittedly, the mountain panoramas are grand, the sweets are delicious and the banks are discreet. Yet this alpine country still offers many other gems. Best example: Montanstahl AG—a family-owned and operated company with roots in the Ruhr region and company headquarters in Stabio in the Italian region of Switzerland in the Tessin Canton. Montanstahl is mainly a steel profile manufacturer that is impressing its customers the world over with its precision products. Founded in 1983 as a profile rolling mill, the co-founders Michael and Wolfgang Stumm turned their company into one of the world’s leading suppliers for special steel and stainless steel profiles. This is a success story

that is based on quality, industry knowledge, service, flexibility and speed, according to Michael Stumm, who is responsible for the commercial side of the company. Wolfgang Stumm, who heads up the technology and controlling areas, adds: “Quality is our top priority.”

In its early years, the company produced steel profiles exclusively for hot rolling processes. Today, the Swiss company uses a variety of methods: Depending on the quality requirements, cold rolling and laser welding are also used and soon production will also include roll joining. Montanstahl made the decisive quality leap at the beginning of the century. “Invent the future—this is the most reliable method of forecasting it!” For the



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*Michael and Wolfgang Stumm
show their profiles*



passionate sailors, the company's slogan was already part of the program at the time: Always close to the wind. The starting point was Munich. To be more precise, the “Laser 2001. World of Photonics” trade show. Up to that time, Montanstahl had looked into and rejected diverse, new production methods as it searched for innovative solutions. None of them met the high quality standards and flexibility demands for machining, tolerances and batch sizes — until the trade show in Bavaria. There Wolfgang Stumm discovered laser technology. Since then, the company has been offering its customers a complete line of standard commercial stainless steel profiles such as brackets, beams, T and U profiles, closed profiles such as box and hollow profiles as well as numerous special profiles according to customer

drawings. The specialist company is also offering customers many ways to save money, the narrowest of tolerances, minimized edge radii and flawless finishes. Montanstahl is striving to achieve delivery times of a maximum of four weeks for all laser profiles by the end of 2008. Most competitors can only dream of this kind of speed between receiving an order and delivering it.

Besides TRUMPF lasers for cutting and welding, the company has additional help in its fast precision production — clever feed systems. The ingenious in-house machines that Wolfgang and Michael Stumm have invested a lot of time into have now paid off. Using a clever feeding technology, the pre-material can be fed into the lasers in any conceivable position,



arrangement and configuration that the lasers then weld into the profile shapes ordered. These machines, unique to Europe, allow for profile lengths of up to 15 meters and dimensions between 30 and 1,000 millimeters. An additional effect of laser welding: The profiles can be optimized based on their application. Accordingly, profile zones that are subjected to low stress are produced using reduced material strengths, and zones of higher stress with correspondingly higher material strengths are produced entirely to the specifications of the engineers and stress analysts.

The production plants' high flexibility also make it possible to do small projects with small batch sizes and even prototype production. "Our efforts include delivering to the client a high quality product," explains Michael Stumm, which is why a 100-percent weld seam inspection is part of the manufacturing process. The control system consistently checks the entire joint of a profile for a complete through weld and automatically detects potential irregularities. Whether in machine manufacturing, in the petrochemicals industry or in the architecture of building facades, Montanstahl laser profiles ensure at any time a constant level of strength, parallel flanges, exact edges and a homogenous surface structure, all of which cannot be claimed by conventional steel products. Aside from precision production and high quality primary materials, for the stainless steel products, a passivation process with a pickling solution developed in-house is responsible for the high Montanstahl quality. The fact that deposits are reliably removed from the stainless steel surfaces goes without saying. It does not get better than this. This quality does not remain unnoticed. Besides loyal industry customers, it has been bringing more and more architects on the scene of late. Steel profiles of this production quality offer entirely new design options for the visible, representative building facade design so that even star architects, such as Frank O. Gehry, architect of the famous Guggenheim Museum in Bilbao, Spain, are showing interest. In answer to the question, what comes to mind when you think of Switzerland? A future answer might be: "Mountains, chocolate, banks and laser profiles." And that is good praise. ■

Contact:

Montanstahl AG, Michael Stumm, Telephone +41 (0) 91 641 68 00,
m.stumm@montanstahl.com

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FLEXIBLE FACADES

Montanstahl AG specializes in stainless steel profiles and beams. Thanks to the laser as a cutting and joining tool, it produces T and U profiles, boxes, hollow profiles as well as numerous special profiles according to customer specifications, even in small batch runs. In the process, profile lengths of up to 15 m are possible.

Europe's state-of-the-art convention center relied on this know-how: Almost 150,000 square meters of Montanstahl profiles are in roofs and glass facades of the nine halls of the Neue Messe (Stuttgart, Germany) and the corresponding International Congress Center.