

Signs point to expansion

MiniTec acquires Swiss specialist in laser welding systems

MiniTec Maschinenbau GmbH & Co. KG is starting the new year with an acquisition. The German mechanical engineering company, a builder of profile and linear systems, has acquired the Swiss company Geiser Tech AG in Otelfingen near Zurich. The acquired company will do business as MiniTec Schweiz AG. It has developed a promising technology for the manufacture of absorbers for solar thermal energy. The takeover strengthens MiniTec's involvement in the area of solar technology and will enable the group's further growth.

Waldmohr/CH-Otelfingen, February 2009 – For MiniTec Maschinenbau GmbH & Co KG, the signs point to expansion. Even as new and impressive building is being built near the current headquarters of the company, the German manufacturer has taken over another company which perfectly complements MiniTec's business areas. The Swiss company Geiser Tech AG has been owned by MiniTec by stock majority since January 23, 2009. In addition to the important German market, international expansion plays a significant role for the Palatine manufacturer MiniTec. Thus in addition to expansion of the worldwide sales network with partner companies in 35 countries, production facilities have also been opened in France, the United States, Great Britain, Spain, Slovakia, and Slovenia.

MiniTec has gained an excellent reputation around the world in the past ten years, especially in the construction of production facilities for photovoltaic modules. The new company will benefit from a great deal of experience in the industrial fabrication of modules. Together with its partner Sunlaser Consulting GmbH, MiniTec Schweiz AG not only has a great deal of competence in plant construction, but also extensive application know-how. The customer has access to experienced specialists for every problem – from the economical design of plants to verification of optimum materials for the finished product. The development of the laser welding process for the manufacture of aluminium absorbers started in 2001. In the meantime, the process has demonstrated its production-readiness in numerous turnkey production machines in use around the world.

Everything depends on the connection

This technology is promising because it joins the absorber pipes to the absorber plate with no visible welding seam on the surface, while the connection can withstand the higher temperatures of high-efficiency modern flat collectors and the process can handle the material combination of aluminium and copper relatively easily. Especially that advantage makes laser fabrication attractive. Anyone using aluminium as the material for the absorber plates can cut costs considerably, in view of the lower raw material prices in comparison with copper, with equivalent or even improved product quality. At a produced absorber area of 50,000 m<sup>2</sup> per year, the use of the laser welding system already pays off in comparison with conventional ultrasound welding techniques.

Laser welding systems (LWS) are offered in three construction forms: as a carousel welding system for full-surface absorbers with meander-shaped fixed endless tubes, or prefabricated copper tubing harps. The systems can be equipped with one laser welding source, or up to four, depending on customer needs. In the highest power class with four laser sources, the LWS can reach a welding speed of over 30 m/min. That corresponds to a yearly capacity of 300,000 m<sup>2</sup>/year in two-shift operation.

The second version is available as a laser portal system for large absorbers of up to 6000x1400 mm with the above features, as well as a system for absorber fin production from coil for dimensions of up to 6000x160 mm in a continuous process, with a yearly capacity of 450,000 m<sup>2</sup>.

An ideal complement

The great experience of the Palatine company MiniTec in assembly technology and factory automation for the photovoltaic industry can now also be used for solar collector production. The serious challenges of the future regarding safe, environmentally friendly power supply can be met with uniform, rational solutions. The bundled competence of Sunlaser Consulting and MiniTec in product planning and material selection, system design and construction, as well as practical

applications and ongoing further development, is a guarantee for optimum quality at the best possible cost-effectiveness. That results in solutions which correspond exactly to the needs of collector manufacturers.