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Press Release

SCHMID machines demonstrate again their excellent capability with the manufacturing of high performance solar cells

The solar cell manufacturer Schott Solar AG, located in Mainz, has demonstrated once again its prominent role in developing cost effective and high performance solar cells with an achieved cell efficiency rate of 19.9% on so-called 'Quasimono' sillicium wafers. With the processing of cells the Mainz company again benefited from systems and processes of Gebr. SCHMID GmbH Freudenstadt. Hereby the photovoltaic specialists reached already by August a new efficiency rate record for industrially manufactured solar cells on crystalline sillicon in the 156 x 156 mm² format.

What was new about the currently manufactured cells was the use of 'Quasimono' wafers. It is about a mono-crystalline wafer that features only a very minor rate of poly-crystalline structure. Crystallization ovens developed by Schott are used for the manufacturing of crystals as a basis. This allows for cost effective mostly mono-crystalline wafers with a high quality to be produced.

As already with the efficiency rate record of 20.2% on purely mono-crystalline wafers in the summer Schott had also this time used the SCHMID machines and processes for producing the cells. The alkaline inline texturing process developed by SCHMID as well as the proven production process for creating a selective emitter structure have been used. With these processes nearly perfect characteristics of the cell front surface can be achieved.

"Of course we are very happy with this result that Schott have been able to reach with the use of our technology", informed Dr. Christian Buchner, Vice President Business Unit Cell of SCHMID Group. "It is clear again that the machines and processes developed by us allow an outstanding efficiency rate in this new generation of wafers. The Quasimono technology will allow for a further reduction in costs for the photovoltaic energy conversion in the near future and, therefore, improving the competitiveness of renewable energy against conventional energy sources."

Also in other areas, for example, metalization and the interconnection of solar cells to modules, the SCHMID Group is currently working flat out on developing cost effective processes. Among these are the design of a new type of emitter electrode as well as improved passivation layers that further optimize the back surface of the solar cell, therefore allowing an even higher cell efficiency rate.

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