RENA and SoLayTec’s InPERC technology reaches 18% Eff. on mc-Si at a major Chinese cell manufacturer site

- 18% efficiency on multi without selective emitter
- InPassion ALD $\text{Al}_2\text{O}_3$ passivation as core technology

RENA’s Inline technology for Passivated Emitter and Rear Cell, “InPERC” is currently being implemented at a major customer’s site on pilot production level. With top cell efficiencies of 18% on multicrystalline wafers, RENA successfully transferred its complete InPERC solution comprising rear-side smoothing, passivation, laser ablation, and overall process integration to its customer’s facility.

SoLayTec’s InPassion Atomic Layer Deposition (ALD) tool is a core component of the InPERC high efficiency concept. Its spatial ALD technology allows ultra-fast deposition of aluminium-oxide ($\text{Al}_2\text{O}_3$) layers with outstanding uniformities and passivation properties. This is key for reaching high cell efficiencies while at the same time minimizing the requested layer thickness and the total process costs.

RENA’s and SoLayTec’s customer adopted the InPERC solution for its high performance pilot line. The top efficiencies of 18% were achieved without using a selective emitter concept and are already on par with the target set up by the Chinese government for new high efficiency cell lines.

RENA GmbH
RENA is a leading production equipment and plant supplier for the application fields Clean Water, Green Energy, Health and Electronics. Around 50 % of the solar cells worldwide are produced on RENA wet processing equipment. In close cooperation with chosen partners, RENA further provides turnkey systems and technology transfer for the photovoltaic industry. RENA is also the main shareholder of SoLayTec.
For more information, please visit www.rena.com.

SoLayTec
SoLayTec is a spin-off company from the Dutch research organisation TNO and established in 2010. The company develops, delivers and services machines for atomic layer deposition (ALD) on solar cells worldwide. The SoLayTec ALD machines are intended for research and industrial mass production in the solar market. SoLayTec high volume production equipment will be exclusively sold by RENA GmbH on the market.
For more information, please visit www.solaytec.com
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