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RENA Technologies and AIKO Solar Energy cooperate in the field of p-type PERC technology and advanced metallization

Guetenbach, 12 June 2017. RENA Technologies GmbH (Germany) and AIKO Solar Energy Technology Co., Ltd. (China) cooperate in the field of p-type crystalline silicon solar cell technology. RENA supports AIKO's transfer to passivated emitter and rear cell (PERC) technology on mono- and multicrystalline silicon and the two companies have agreed to cooperate in the field of plated front side electrodes to replace costly printed silver pastes.

AIKO Solar Energy is currently migrating its production to PERC technology and takes advantage of the flexibility of RENA's production equipment. Both the alkaline texturing equipment "RENA BatchTex" and edge isolation equipment "RENA InOxSide+" allows tuning of the processes to achieve the desired surface morphology for the manufacturer's PERC products. AIKO is fabricating both mono- and multicrystalline silicon solar cells with passivated surfaces and recently also launched its bifacial cell product line using monocrystalline silicon. "The RENA products allow us to easily adjust the processes to meet the technical requirement of the corresponding cell structure: we need different surface conditions for our different products. The texturing and edge isolation tools from RENA enable an easy change and adaption in the production", explains Chairman Chen Gang from AIKO Solar Energy.





texturing of monocrystalline silicon

RENA BatchTex N400: Equipment for alkaline RENA InOxSide+: Equipment for wet chemical edge isolation, flexible rear side smoothing and PSG etching

As of Q2/2017, AIKO has achieved conversion efficiencies above 21.5% on monocrystalline p-type PERC devices and recently launched its bifacial p-type PERC product with a bifaciality above 70%.

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"We are very happy that AIKO Solar Energy continues to rely on the quality of our wet processing equipment to ramp their capacity in the field of PERC solar products," states Dr. Christian Peter, VP Sales of RENA Technologies GmbH. Up to $\Omega 2/2017$, AIKO Solar Energy has ordered production equipment for a cell fabrication capacity of more than 4 GW with RENA.

AlKO and RENA also started to cooperate in the area of plated front side contacts. Chairman Chen Gang from AlKO states: "The price pressure in the solar industry continues to push us to constantly look at cost-down measures. AlKO Solar is committed to implement the newest and most innovative technologies into production to achieve such cost reduction. The plating technology using the "RENA InCellPlate" will help us to drive down the cost as we can replace the screen-printed front side silver electrodes. This will be a major cost saving." RENA will deliver an InCellPlate production tool later this year to AlKO's new fabrication site at the city of YiWu in Zhejiang province. The two companies state that more than 0.01 USD per watt could be saved in the fabrication costs of the cells, being more than 15% relatively.





RENA InCellPlate: Inline processing AIKO Solar equipment for chemical deposition of in Shanghai nickel, copper and silver.

processing AIKO Solar and RENA staff at SNEC 2017 position of in Shanghai

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About RENA Technologies GmbH

"THE WET PROCESSING COMPANY" RENA Technologies is the world's leading supplier of production equipment for wet chemical surface treatment. RENA products are used in the areas of application Solar, Medical and Microelectronics, which reflect the vital needs of people living in today's industrial society. RENA Technologies products are used to treat surfaces of e.g. solar cells, semiconductor wafers or dental implants using wet chemicals or water. RENA produces standardized machines with guaranteed processes as well as systems tailored to specific customer requirements.

The area of Solar applications includes activities for solar cell- and solar wafer production. Typical products for the field of Medical includes surface processing systems for dental implants or optical implants. Please find further information here: www.rena.com

About AIKO Solar Energy Technology

Guangdong Aiko Solar Energy Technology Co., Ltd. is a major manufacturer of crystalline silicon solar cells. With its headquarters in Foshan city (Guangdong province), it is currently expanding its manufacturing capacity. Registered in Suxi Town, Yiwu, Zhejiang, with a registered capital of RMB 600 million yuan, Zhejiang Aixu Solar Energy Technology Co., Ltd. (Zhejiang Aixu) is established by Guangdong Aiko Solar Energy Technology Co., Ltd. as its wholly-owned subsidiary. The company's main business is focused on the production of efficient crystalline silicon solar cells. Zhejiang Aixu plans to invest 6 billion yuan into a project with the total capacity of 8GW. The construction of the project will be completed within 5 years in in three phases. The first phase of 2.65GW is to be completed and put into production by the end of September 2017.

Press contact:

RENA Technologies GmbH Dirk Hensel

Phone: +49 7723 9313-914

Dirk.hensel@rena.com