

PRESS RELEASE

EU PVSEC 2012

FHR introduces highly productive CIGS foil coating solutions for the photovoltaics industry and presents outstanding results in layer deposition of transparent electrodes (TCO)

Ottendorf-Okrilla, 24 September 2012 – After shipping 12 CIGS coating systems mainly for R&D purposes and pilot lines worldwide, FHR Anlagenbau currently commissions roll-to-roll foil coating systems that achieve throughput and competitiveness comparable with highly productive CIGS deposition systems for glass substrates. Optimally adjusted sputter and evaporation processes allow stable characteristics of thin back contact, absorber and front contact layers along deposition width and length spanning several kilometers. Currently, operating time is only limited by available reel length of highly temperature-stable plastic foil.

The transparent conductive electrode (Transparent Conductive Oxide, TCO) plays a decisive role in CIGS solar cell manufacturing. To achieve a good absorption of sunlight and a good transmission of electricity simultaneously, the TCO layer requires a good light transmission and a high electric conductivity. The latest equipment generation of FHR Anlagenbau achieves excellent layer characteristics: For 1000 mm wide TCO layers remarkably low specific electrical resistivities of $5 \times 10^{-4} \text{ Ohm} \times \text{cm}$ at a high transmission rate of 87 % are achieved. For comparison only: uncoated glass panes offer a transmission of approximately 92 %.

In addition to foil coating solutions for the photovoltaics industry FHR Anlagenbau presents on this year's EU PVSEC in Frankfurt/Main its product portfolio in the field of sputter targets and inline production plants.

About FHR Anlagenbau GmbH

FHR Anlagenbau GmbH in Ottendorf-Okrilla (Germany) is specialised in the development of innovative thin-film coating technologies and equipment and renders services in the field of thin-film technology. The enterprise was founded in 1991 in Dresden and has been part of the centrotherm photovoltaics group since 2008. The major business field is the construction of coating equipment for industrial production and research applications which feature a range of vapour deposition, sputtering, CVD and ALD technologies. FHR's product portfolio comprises vacuum processing plants for many branches of industry, including photovoltaics, in particular CIGS solar cells and organic PV cells, solar thermal plants, optics, electronics, sensor technology and the automotive sector. A strategic product focus is put on foil and web coating plants for the manufacture of bendable electronic parts, flexible solar cells and organic display films. FHR occupies a leading technology and market position in this field. Another business unit of FHR manufactures sputter targets for the coating industry. FHR closely collaborates with renowned research institutions and industry partners world-wide.

FHR Anlagenbau GmbH
Am Hügel 2
01458 Ottendorf-Okrilla
Germany
Web: www.fhr.de

Contact

Michael Schneider
Marketing & Communications
Phone: +49 35205 520-302
E-mail: schneider@fhr.de