

One Million Solar Receivers Eine Million Solarreceiver

If you were to line up all of the solar receivers that SCHOTT Solar has manufactured, this line would be 4,000 kilometers long.

Alle von SCHOTT Solar produzierten Solarreceiver würden aneinandergereiht eine Strecke von 4.000 Kilometern ergeben.

KARSTEN KRONE

Advanced technology from SCHOTT has been contributing to the commercial success of solar thermal power plants and supplying entire cities with electricity since the 1980s. SCHOTT's one millionth receiver is earmarked for installation in one of the many Concentrated Solar Power (CSP) plants that are being planned in different regions of the world. Today, CSP power plants are located in countries like Spain, the United States, Morocco and Abu Dhabi. The very first power plant in the Indian state of Rajasthan is even being built at the moment. SCHOTT supplied the 17,000 solar receivers that will generate around 100 gigawatt-hours of power each year when the plant is finished in 2013.

The receivers in CSP power plants convert concentrated solar radiation into heat that is used to produce steam to start with and then electrical power inside a steam turbine. The question of how much solar energy a receiver is capable of storing is crucial to the efficiency of a solar power plant. SCHOTT is now ready to set new standards when the company starts manufacturing its latest generation of CSP receivers. SCHOTT has used an improved product design to increase the efficiency of its receivers quite significantly already on several occasions. The unique thing about receivers from SCHOTT is that they contain an integrated noble gas capsule that can be opened at any time during operation of the power plant to minimize heat loss and maximize the efficiency of the plant. A life insur-

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aufnehmen kann, ist entscheidend für die Effizienz des Solarkraftwerks. Mit dem Start der Produktion der neuesten Generation der SCHOTT CSP-Receiver setzt der Konzern Maßstäbe. Durch ein verbessertes Produktdesign hatte SCHOTT den Wirkungsgrad der Receiver mehrfach enorm verbessert. Die Besonderheit der neuesten Receiver aus dem Haus SCHOTT: Eine integrierte Edelgaskapsel kann zu jedem Zeitpunkt während des Kraftwerkbetriebs geöffnet werden, dadurch Wärmeverluste minimieren und die Effizienz des Kraftwerks maximieren. Eine Art Lebensversicherung für den Receiver. Die CSP-Technologie gilt als besonders zukunfts-trächtig, weil sie ein Garant für Stabilität im Stromnetz ist. Denn die im Receiver gesammelte Wärme kann, im Gegensatz zu anderen erneuerbaren Energien, gespeichert und dann in Strom umgewandelt werden, wenn im Netz Energie tatsächlich benötigt





Photo | Foto : schott/J. Meyer

ance policy for receivers, so to speak. CSP technology is believed to hold extremely high potential for the future because it helps to ensure the stability of the power grid. After all, unlike other types of renewable energy, the heat collected inside the receiver can be stored and then transformed into electricity when the grid is actually in need of power.

A light tower project was announced at the annual conference of the industrial initiative Dii in November 2012. A cross-country agreement should make it possible to build a pilot power plant in Morocco and lay down the rules on importing green electricity to Europe.

The goal of Dii is to cover roughly a fifth of Europe's electricity needs with the help of inexpensive electricity from the Sahara by 2050. The technology is already available, but the political framework conditions are still missing. For this reason, the industrial network German CSP that includes 35 German solar companies and research institutions is also demanding more support from politicians. Solar energy needs to become a permanent component of German industrial and energy policy and the publicly funded financing instruments that support solar thermal power plants abroad must be extended and revised. In the years to come, German CSP expects concentrated solar power to reach an annual market volume of 15 billion euros.

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Solar receivers from SCHOTT form the heart of solar thermal power plants. In fact, the one millionth solar receiver recently left the plant in Mitterteich, Germany.

Herzstück solarthermischer Kraftwerke sind Solarreceiver von SCHOTT, von denen der millionste Solarreceiver vor kurzem das Werk im bayerischen Mitterteich verlassen hat.

wird. Ein Leuchtturmprojekt wurde im November 2012 auf der Jahreskonferenz der Industrie-Initiative Dii angekündigt. Ein staatenübergreifendes Abkommen soll den Bau eines Pilotkraftwerkes in Marokko ermöglichen sowie den Import von Ökostrom nach Europa regeln. Ziel der Dii ist es, ab dem Jahr 2050 etwa ein Fünftel des europäischen Strombedarfs mit günstigem Sahara-Strom abzudecken. Die Technologie hierzu ist vorhanden, nun fehlt es an den politischen Rahmenbedingungen. Forderung nach mehr Unterstützung der Politik kommt daher

auch vom Industriennetzwerk Deutsche CSP, zu dem 35 deutsche Solarfirmen und Forschungseinrichtungen gehören. Solarenergie solle fester Bestandteil der deutschen Industrie- und Energiepolitik, die staatlich geförderten Finanzierungsinstrumente zur Unterstützung von solarthermischen Kraftwerken im Ausland ausgeweitet und angepasst werden. Die Deutsche CSP rechnet in den kommenden Jahren mit einem jährlichen Marktvolumen für die konzentrierte Solarenergie von 15 Milliarden Euro.

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