

Corporate News

centrotherm photovoltaics reports further progress with centaurus technology: successes with customer projects and in further development

- **Implementation concluded at a European customer, ongoing negotiations about expansion**
- **Improved performance through optimizing the selective emitter process and through fine line printing**
- **"centaurus FLEX" flexible upgrade concept forms focus of EU PVSEC trade fair profile in Frankfurt**

Blaubeuren, September 24, 2012 – centrotherm photovoltaics' centaurus technology continues to achieve further advances in the current market environment. Following successful project progress at a first customer in China, the supplier of technology and systems from Blaubeuren, Germany, is now also gaining market shares in other Asian countries with centaurus. In particular, technologically highly-developed cell manufacturers are currently showing great interest, as centaurus technology facilitates rapid entry into the production of highly-efficient cells and modules. In contrast to other concepts for rear side passivation, this technology is based on tried and tested processes and materials, and enables simple integration into mass production at a constant cost level compared with the standard process. centaurus solar cells can also be further processed within conventional module construction.

Successful customer projects have allowed centrotherm to prove the centaurus technology's mass production maturity. Ramp-up was also successfully concluded at a European customer. Negotiations concerning further expansion are already underway.

centaurus technology has also been consistently further developed over recent months, with its efficiency having been boosted significantly through improved laser optics. This step has allowed the laser diffusion to be better adapted to realizable metallization production tolerances. In addition, centaurus was successfully equipped with fine line metallization, which has already proved successful in production. Average efficiencies above 19.5% are currently being achieved at customers, with 20% solar cells being attained in production in the best batches.

centrotherm is continuing to consistently pursue its upgrade strategy, offering its customers the opportunity to considerably reduce their production costs. Among other developments, the upgrade products' flexibility has been further boosted to this end. Along with turnkey lines and upgrade packages, implementing centaurus technology under partial integration of existing systems is now possible with the "centaurus FLEX" upgrade concept. This significantly reduces not only investment costs, but also integration time and expense.

At the 27th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC), centrotherm photovoltaics' trade fair presence focuses on technology upgrades for highly-efficient solar cells.

centaurus technology combines selective emitter technology with a rear-side passivation through a dielectric layer and a local aluminum back-surface field (Al-LBSF). Compared to industrially produced standard solar cells with full-area Al-BSF, centaurus cells exhibit a significantly lower recombination velocity on the rear side. The internal light reflection is also improved in the long-wave area, and consequently the short-circuit current.

A further plus point relating to solar cells produced with centrotherm technology is that modules with centaurus solar cells have not only passed the potential-induced degradation (PID) tests performed by the Fraunhofer Centre for Silicon Photovoltaics (CSP), but have met the conditions for at least double the test duration. PID is a voltage-related performance degradation in crystalline solar modules, which is induced by so-called leakage currents. PID can generate significant performance losses in modules.

Stand information for the centrotherm photovoltaics Group:

Frankfurt Trade Fair, Hall 3, Stand C6

About centrotherm photovoltaics AG

centrotherm photovoltaics AG, which is based at Blaubeuren, Germany, is a globally leading technology and equipment provider for the photovoltaics sector. The company equips well-known solar companies and new sector entrants with turnkey production lines and single equipment to manufacture silicon, and crystalline solar cells and modules. As a consequence, the Group possesses a broad and well-founded technological basis, as well as key equipment at practically all steps of the photovoltaics value chain. centrotherm photovoltaics guarantees its customers important performance parameters such as production capacity, efficiencies, and completion deadlines. The Group currently employs around 1,300 staff, and operates globally in Europe, Asia and the USA. centrotherm photovoltaics achieved revenue in the 2011 financial year of around EUR 700 million. The company is listed in the Prime Standard on the Frankfurt Stock Exchange.

centrotherm photovoltaics AG
Johannes-Schmid-Strasse 8
89143 Blaubeuren
Internet: www.centrotherm.de
ISIN: DE000A0JMMN2
WKN: A0JMMN
Admitted to the Regulated Market/Prime Standard, Frankfurt Securities Exchange
Corporate domicile: Germany

Contact:

Saskia Feil
Senior Manager Investor & Public Relations
Tel: +49 7344 918-8890
E-mail: saskia.feil@centrotherm.de

Nathalie Albrecht
Manager Public Relations
Tel: +49 7344 918-6304
E-mail: nathalie.albrecht@centrotherm.de