Press Release

VDMA Photovoltaic-Equipment:
Strong growth is followed by reassurance

- The solar industry invests at the beginning of the year more cautious
- Record export rate of 91 percent
- Equipment for the solar industry increases sales by 20 percent in 2016

Frankfurt, May 11th, 2017: The international solar industry invested heavily in new production capacities last year. The manufacturers of components, machines and plants for photovoltaics in Germany also benefited from this. Incoming orders in 2016 exceeded the orders for the entire last year by 36 percent, while sales were 20 percent higher than in the previous year. Lower feed-in tariffs in China, however, have significantly dampened investment in production equipment at the end of the year. The order books of the solar equipment manufacturers are still well filled, but in the fourth quarter of 2016, a ratio of orders to delivered installations ("book-to-bill") of only 0.6 was reached.

In the fourth quarter, machinery and equipment manufacturers in Germany posted growth of 30 percent compared to the previous quarter. Compared to the same period of the previous year (October to December 2015), sales were reduced by 6 percent.

Companies in Germany expect a lateral movement for the next period. "The investment activity of the solar cell manufacturers in the expansion of existing and new production capacities slows down. Production is busy. New orders include upgrades to high-efficiency technologies and bifacial technologies, especially for Black Silicon bigger investments in equipment is expected," said Dr. Peter Fath, Managing Director of RCT Solutions GmbH and Chairman of the VDMA Board of Photovoltaic Production.
Asia is the largest business

The export ratio of German photovoltaic equipment suppliers reached the record level of 91 percent in the last three months of 2016. The bread and butter business continued to be in East Asia, the share of the total turnover from there in the fourth quarter of 2016 being 69 percent. Asia’s sales were as follows: the largest share was made with China (38 percent), followed by India (13 percent) and Taiwan (7 percent). Korea undermatches 2 percent, while the rest of the Asian countries, including Malaysia, account for 10 percent. The USA also recorded a high share: 15 percent of sales in the fourth quarter of 2016 were achieved across the Atlantic. Germany remained the top performer in Europe with a turnover share of 9 percent, while the other European countries accounted for 5 percent of sales. The strongest sales segment in the fourth quarter of 2016 was the production equipment for cell (51 percent) for the German manufacturers, followed by poly-silicon, ingot and wafer production (16 percent), as well as equipment for the crystalline backend - module production - with 14 per cent. Production solutions for thin-film photovoltaics accounted for 19 percent, which is due to the currently larger activities in the CIGS (Copper-Indium-Gallium-Selenide) sector.

Order intake declined in the last quarter

Although order intake in 2016 was better than in 2015, orders in the fourth quarter of 2016 fell by 18 percent compared to the same quarter of the previous year and by 34 percent compared to the previous quarter. In the fourth quarter, the regional allocation again had an Asian focus with 65% of all orders, followed by the USA with 19% and Europe with 8%. Germany followed with 7 percent. "The order situation in the fourth quarter of 2016 was more cautious, but national targets for the expansion of renewable energies in China are increasingly leading to investment in thin-film technologies. For the crystalline applications, we see a further shift into the new markets outside China, as well as in efficiency-enhancing technologies (PERC, PERT, etc.) and bifacial technology, which uses both side active cells and modules", explained Dr. Jutta Trube, Managing Director VDMA photovoltaic production equipment. The order book of the photovoltaic
manufacturers reached 6.1 months of production in the fourth quarter of 2016, thus is
below the timeframe of the entire machinery industry (5.9 months in April 2017).

Currently, approximately 100 VDMA member companies are active in the photovoltaic sector. The topic
started in 2007 as a co-operation between the following VDMA divisions: Electronics Production
(Productronics), Glass Technology, Energy, Organic Electronics, Robotics and Automation, Laser and
Photonics, Surface Treatment, Vacuum Technology and Displays. With the foundation of the enlarged
platform Photovoltaic Equipment on March 30, 2010, activities for members have been extended and the
visibility of the industry has been increased.

The German Engineering Federation (VDMA) represents more than 3,200 companies in the engineering
industry, many of which are small and medium sized enterprises. With actual more than 1 Million
employees all over Germany and a sales turnover of 218 billion Euros (2015) the industry is the biggest
employer and one of the leading sectors of the German industry as a whole.