Press information

Lightweight construction: Lightweight and solar powered around the world

New reports at humans-machines-progress.de

Frankfurt, April 13, 2017 – VDMA celebrates its 125-year anniversary in 2017 under the motto “Humans – Machines – Progress”. Mechanical engineers and their association have always considered machines to be the means for achieving progress for mankind. On the Internet portal https://humans-machines-progress.com/ VDMA presents multimedia reports that illustrate how we can master the major challenges of our time.

The portal was launched in January and focused on the topics Energy, Work 4.0 and Nutrition; three additional reports have been added since:

- **Urbanization**: Big cities, major tasks
- **Health**: Medical technology ensures good health and quality of life
- **Lightweight construction**: Lightweight and solar powered around the world

The subtitle for lightweight construction picks up on the round-the-world flight with the Solar Impulse solar aircraft made from extremely lightweight construction. Otto Lilienthal was the first person to carry out a controlled glide flight – also using lightweight construction materials – at the same time VDMA was founded. Then as now, ingenuity and courage are the driving force behind major innovations.

The lightweight construction report explains manufacturing processes across materials for components made of fiber reinforced plastics or for aluminum and steel components. Current developments in 3D printing are mentioned as is the merging of various lightweight construction materials via multi-material design. Whether it is aircraft or automotive construction, wind power plants or in the construction sector, lightweight construction is used everywhere where people want to move forward while saving energy and resources and exercise sustainable management. Here, mechanical and plant engineering is the driving force as the provider of technology.
VDMA represents nearly 3,200 mostly medium-sized companies in the mechanical and plant engineering sector. With over one million employees and sales amounting to approximately 218 billion euros (2015), the sector is the largest industrial employer in Germany and one of the leading German industrial sectors. 200 members of the Hybrid Lightweight Technologies working group are active in mechanical engineering and user and supplier industries as well as research.