

**Interview Questions on the Occasion of the DVS Value Added Study and "SCHWEISSEN & SCHNEIDEN 2017"**

***Value Added by Joining, Cutting and Coating Technologies***

- 1. From September 25 to 29, 2017, over 1,000 trade exhibitors will once again present themselves at the world's premier fair with a strong turnover, SCHWEISSEN & SCHNEIDEN, including all the market leaders in the joining, cutting and coating technologies. Why has DVS used the fair as an opportunity for its latest value added studies since 2001?**

As a technical society, we mainly pay attention to the developments of technologies. In order to be able to highlight any alterations relevant to the market as well as any macroeconomic developments, we commission a study every four years on the occasion of the world's premier fair. It serves the purpose of portraying the status and developments of these technologies. Welding is a cross-sectional technology and has a much higher significance in Germany than can be deduced at first glance.

- 2. According to the study, Germany is at the top of the value added in the European comparison (EU 28) with 45 percent. Does it supply an explanation for the success of German companies?**

German firms are innovative and there are always very many new ideas - e.g. to achieve higher energy efficiency with improved productivity at the same time. From the study results, it can be concluded that our economy is very well-positioned both in the production and application of joining, cutting and coating technologies. In this respect, one factor which should not be underestimated is the working productivity. It rose between 2012 and 2015. The primary driving force which we see relates to more efficient procedures on the market.

- 3. The tendency for value added and productivity in the next few years is continuing to be upward. What roles are being played by digitisation, automation and additive manufacturing?**

**Have you investigated or identified any trends at this point? How did you come to the results?**

Value added and productivity are closely connected. Automation and digitisation permit more efficient working and producing and thus raise the productivity. The same applies to completely automated working sequences. When the study was commissioned, it was certain that additive manufacturing must be covered by the value added. There are various studies which prove its increasing market significance but, until now, no statistically evaluable or evaluated material for Germany. That makes it more difficult to establish the value added. In this respect, 3D printing is not a new invention. The procedure has already existed for over 30 years.

- 4. Can any statements be made about the significance of the digital technologies for the value added?**

On this subject, it has been possible to say little until now since there is a lack of statistical information. However, conventional technologies continue to have more than just a justification even if there are fields in which the digital technologies are being utilised to an increasing extent - e.g. in the automotive industry. Digitisation is picking up speed in the skilled trades, too. The materials are changing. Thus, ever more plastics which can only be processed in different ways are being utilised. In turn, individual fabrication procedures must be developed for this purpose. Today, digital technologies are already a permanent constituent in many fields, are firmly connected with conventional applications and cannot be thought apart.

**5. Where do you see the relevance of the study results for the sector and its companies?**

There is a strong demand for the study. For our member businesses, it is primarily the employment and education figures which are interesting in times of the shortage of specialists. For the determination of the macroeconomic value added, it is important to consider the production of JCC technologies and the application in the economy together. Education plays a great role here. The study supplies figures and arguments in order to make further investments in education and, for example, to be able to highlight the need for promotion. At this point, the latest study shows that there is still a high need for further education. Especially for welding, there are no longer any independent training occupations. The skills are passed on within the framework of additional qualifications and are merely a constituent of the training to become a specialist for metal technology. Precisely for the booming field of robotics, there is an increased need for robot operators who must be trained first of all. As a rule, the operation of this technology is manufacturer-specific.

**Can any concrete approaches for industry and skilled trades be identified with the study?**

The statistical data does not permit any such differentiation. Instead, attention focuses on the macroeconomic significance of the joining, cutting and coating technologies. Therefore, it is not possible to derive any concrete recommendations for action.

**6. Over 60 percent foreign exhibitors will be represented at SCHWEISSEN & SCHNEIDEN. What role does internationalisation play with regard to the value added by the JCC technologies today and in the future?**

The field of the joining, cutting and coating technologies has a much higher significance in Germany and internationally than can be deduced at first glance, as the study shows. Moreover, all the market leaders and many SMEs are globally active. To this extent, there are always international aspects. The value added by German companies has effects beyond the country's own borders. Exactly for this reason, it is particularly

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important to DVS in cooperation with Messe Essen to be able to present technical innovations and highlights to the trade public beyond Europe's borders with the world's premier fair and to offer a platform for exchanging ideas.

**7. Can a recommendation for action for the economic and political fields be derived from the macroeconomic value added data?**

The political field must realise that the more than 250 joining procedures at present guarantee that Germany is also continuing to act as the export world champion on the market. The constant refinement of the procedures in joining, cutting and coating underpins the quality characteristic of "Made in Germany".

It is also indispensable for the financial backers of the German research landscape to realise that massive investments should be made in the research into additive manufacturing in order to be able to keep pace with the strong research endeavours of the USA and China.

**8. To what extent are the results of the study reflected at the fair?**

The German market leaders represented at SCHWEISSEN & SCHNEIDEN are confirming the market trends of Industry 4.0 and additive manufacturing with innovative products and technologies from the fields of robotics and laser technology.

**Interview partner:**

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*Excerpt from brief curriculum vitae*

- *Doctorate in the field of Surface Technology at the University of Dortmund*
- *Ten years of project management at the Technology Transfer Ring of the Skilled Trades in North Rhine-Westphalia (TTH)*
- *For almost two years, Coordinator for the Skilled Trades in DVS*

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**Study:**

*"Macroeconomic and sectoral value added by the production and application of joining technology in Germany, in selected countries in Europe as well as in the EU as a whole", RUFIS, Ruhr Research Institute for Innovative and Structural Policies in Bochum, on behalf of the German Welding Society (DVS).*