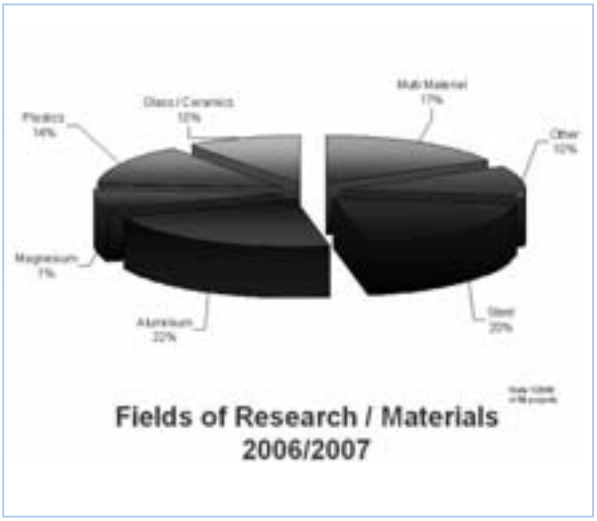
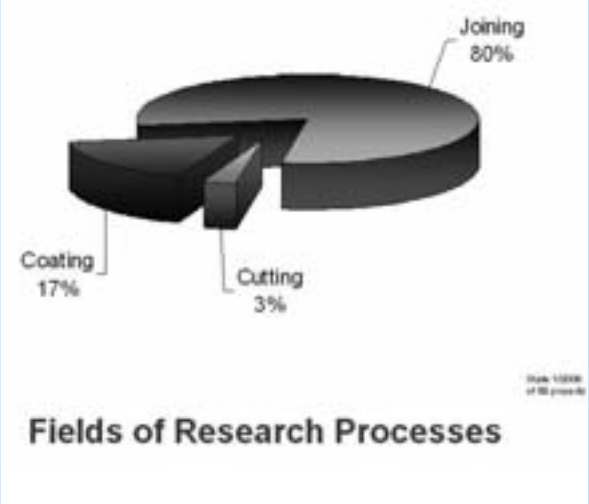
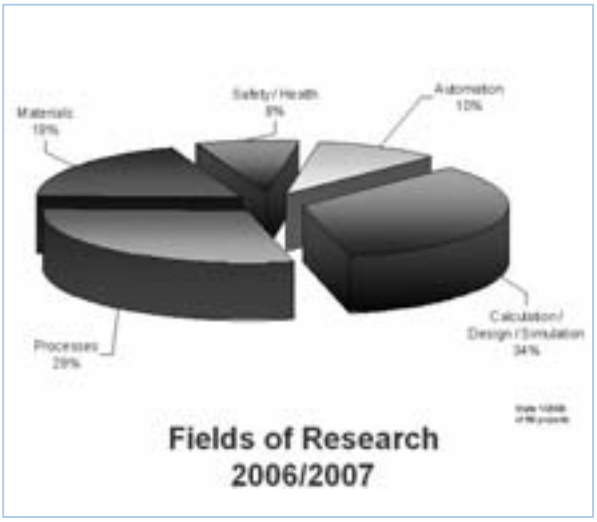
Cooperative Applied Research in Joining, Cutting and Surfacing (JCS) Technology

Results and Applications

The objective of the cooperative applied research in JCS technology conducted by the Research Association for Welding and Allied Processes of DVS is to elaborate directly usable research results for small and medium sized enterprises (SME). In this respect, cooperative applied research offers the participation of SMEs and research institutes from all fields of JCS technology. In this case, SMEs can define a common need for research and can determine research directions and main focal points. This approach taken by the cooperative applied research in JCS technology guarantees not only the greatest possible proximity to the application of the research subjects but also optimum and rapid utilisation of the research results.
The participation of industrial representatives in all the process steps allows the know-how to be transferred to the SMEs at an early stage. Research projects can be promoted via Arbeitsgemeinschaft industrieller Forschungsvereinigungen "Otto-von-Guericke e.V." (AiF - the "Study Group of Industrial Research Associations") from funds provided by BMWI (Federal Ministry of Economics and Technology).







AiF Poster Session

Cooperative Applied Research in the field of Thermal Spraying

Greater significance has recently been attached to cooperative applied research work relating to the manufacture and safeguarding of the characteristics of thermally sprayed coatings. There are a series of interesting usable research results on this subject. Within the framework of ITSC, selected research projects will be presented with their results and application possibilities within this AiF Poster Session.

The AiF Poster Session will be held during the conference. The poster presenters will be available for discussion scheduled as follows:

Monday, June 2, 2008, 12:30 – 13:30
Monday, June 2, 2008, 17:20 – 18:20
Tuesday, June 3, 2008, 13:00 – 13:30
Wednesday, June 4, 2008, 13:00 – 13:30

In addition, further contacts with the authors can be arranged.

1. **Development of near net-shape coatings for wear and corrosion protection**
   F. Bach, K. Möhwald, T. Bause
2. **Improvement of the corrosion resistance of magnesium alloys by means of coating and remelting**
   B. Wielage, T. Lampke, H. Pokhmurska
3. **Corrosion of alumina-based coatings**
   C. Stahr, L. Berger, H. Herrmann, D. Deska
4. **Cladding of aluminum substrates with nanocrystalline solidifying wear resistant iron-based materials**
   J. Wilden, S. Jahn
5. **Production of high quality anti-corrosion and wear-resistant wire arc coatings**
   J. Wilden, S. Jahn
6. **FeNiW-coatings for casting molds in the aluminum industry**
   J. Wilden, S. Jahn
7. **Diffusion barrier coatings for CFC-components by plasma spraying – some research results of the project**
   K. Bobzin, F. Ernst, K. Richardt, L. Zhao
8. **HVOF-sprayed TiC-strengthened Fe-coatings as alternative for conventional carbide materials**
   K. Bobzin, F. Ernst, K. Richardt, T. Warda
9. **Improving the reproducibility and the comparability of bond strength values**
   K. Bobzin, F. Ernst, K. Richardt, T. Schläfer
10. **Influence of the spray angle on characteristics for atmospheric plasma sprayed hard material based coatings**
    W. Tillmann, E. Vogli, B. Krebs
11. **Asymmetric melting behavior in twine wire arc spraying with cored wires**
    W. Tillmann, E. Vogli, M. Abdulgader
12. **Superfine structured and nanostructured hard material coatings produced by means of HVOF flame spraying**
    W. Tillmann, E. Vogli, I. Baumann, G. Matthäus, T. Ostrowski
13. **Tribological study of thermo sprayed specimens using wear resistance equipments**
    W. Tillmann, E. Vogli, A. da Cunha
14. **Detonation flame sprayed diamond-bronze coatings for grinding**
    W. Tillmann, E. Vogli, J. Nebel