



Photo (from left to right):

Dr. Philipp Rösler (Federal minister for Economy and Technology),

Prof. Dr. Horst-Christian Langowski (Fraunhofer-IVV, Freising),

apl. Prof. Dr.-Ing. Christoph Herrmann (TU Braunschweig),

Dr. Heinz Dwuletzki (Carl Bechem GmbH),

MdB Franz Obermeier,

Prof. Dr. Hans-Joachim Kumpel (Federal Agency for Earth Sciences and Mining)

Press Information

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German Resource Efficiency Award 2011 for a project consortium led by Fraunhofer IVV

The Fraunhofer Institute for Process Engineering and Packaging IVV received the "German raw material efficiency Award 2011" together with the Institute for Machine Tools and Production Engineering of the TU Braunschweig and Carl Bechem GmbH for the development of an oil-free lubricant on polymer base used in the metal processing. The new lubricant is able to replace the previously existing mineral oil based lubricants in metal cutting. The award ceremony took place on 30th November 2011 in the Federal Ministry of Economics and Technology (BMWi) in Berlin.

Currently in the German metal processing is used in every single year round 1.7 million tones of lubricants. In most industrial applications these petroleum-based lubricants are the basis for technical applications. Against the backdrop of dwindling petroleum resources and the continued cost-increasing procurement and disposal costs, which currently amount to around €3.3 billion, metal-processing companies are looking for alternative lubricants.

As part of a funded research project by the Federal Ministry for Education and Research, a brand new water-based and by using a cellulose-based adjusted viscosity polymer lubricant is developed within the cooperation of the award winners. This polymer-based lubricant combines high cooling effect of water with the lubricating effect of a conventional oil-based lubricant. The

newly developed lubricant is already marketed under the product name BERUFLUID by Carl Bechem GmbH and used in various metal processing company in the tool making, mechanical engineering, automotive and aerospace industry to medical technology. Apart from the significantly lower environmental effects and high raw material efficiency, the new lubricant has technological advantages too. For example, the new coolant reduces the tool wear and extended tool life. Also the lubricated parts can be easily cleaned. This reduces operating costs and improves process efficiency. In addition, work safety and hygiene increases, since there are no oil mist and less biocides need to be added.

At the conference "Commodities ensure success for the future - and make efficient use of material resources", the Federal Minister of Economics and Technology, Dr. Philipp Rösler, has given for the first time in this year the German raw material efficiency Award 2011 for innovative approaches from business and science. To anchor the importance of resource and material efficiency and its effects stronger in the economy, the BMWi in Cooperation with the German Resource Agency drove by for the first time in 2011 the Competition "German raw material efficiency prize". The award recognizes outstanding products, processes or services and application-oriented research results.