

MetFoam 2005 in Kyoto (Japan), 21-23 September 2005

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Cellular Metals are becoming a more and more established R&D field. One indicator for this is that conferences with increasing numbers of participants are being held regularly now, showing that the community is continuously growing.

One very successful series of conferences is "MetFoam" which is dedicated to cellular metals with a strong emphasis on metallic foams. The first conference of this kind was held in 1999 at the Fraunhofer Institute in Bremen, after which it was decided to repeat this event every 2 years. The first three MetFoam conferences took place in Germany – mainly because of the strength of both academic and industrial activities there – but now it was felt that the fourth conference – MetFoam2005 – should become truly international by moving to Japan from where many new developments had been reported in the past years. A good decision, because at the end of the event 230 attendees from 20 countries were counted from which 60 came from industry and almost 100 were not outside Japan. With 21 delegates Germany had the second largest representation after Japan, followed by the USA, Korea, China and Canada.

New aluminium foam products

Beside the steadily increasing numbers of participants the general opinion after the conference was that quite a number of new developments had become visible. All aluminium foam producers presented new products. The Japanese "Alporas" is now available as shaped foam component. The Austrian "Alulight" presented a new facility for the mass production of aluminium foam parts and the first magnesium foam counterparts made by the novel "vacuum foaming process" recently developed. The German "applied

light-weight materials (alm)" showed their latest aluminium foam sandwich products. They appeared markedly larger, bet-

ter and cheaper than two years ago. New players were entering the market such as the Canadian "AGS Taron" with a novel powder rolling process for making less expensive precursors for aluminium sandwich components.

High-strength cellular metals

Beside aluminium foams other materials showed some interesting developments: so-called lotus materials now seem to be at the verge of real applications, e.g. as heat sinks. High-strength cellular metals made of amorphous metals were proposed. Although still appearing rather exotic, they could become interesting in future. Quite a number of talks on cellular magnesium, titanium or steel could be heard challenging aluminium as the predominant base material for cellular metals.

The opinions after the conference were very positive: Peter Schäffler from "Alulight" sees a positive trend in aluminium foam technology. At and after the conference he was able to meet many potential customers in Japan and was able to strengthen existing and to start new co-operations. He noticed that the attitude to share experience and to discuss common problems was more pronounced than previously which he thinks is because companies are realising that the chance for succeeding with aluminium foam products on the market is much higher when companies – even competitors – collaborate. He expressed the optimistic view that at the next "MetFoam" the breakthrough



Aluminium foam (photo: METALL)

in aluminium foam commercialisation will have been reached.

Günther Gleich from "Gleich GmbH" – active both in applying Japanese "Alporas" foams and in producing own aluminium foams – praised the quality of many presentations and the good organisation of the conference. He suggests to hold special workshops at future conferences dedicated to special application areas – e.g. automotive safety, noise prevention, machine construction – to improve the likelihood to find new partners.

New ideas for metal foams

Wolfgang Seeliger from "alm" – specialised on aluminium foam sandwiches (AFS) – expressed his satisfaction that he could meet a number of potential customers at the conference and convince them that AFS is becoming an increasingly applicable material. Moreover, he reports that some of the presentations have given him new ideas how to improve his AFS process which he is planning to implement immediately after the conference. After so many positive statements already during the conference, the International Committee did not hesitate to decide to hold another MetFoam conference in 2007. It will be in Montreal, Canada. An announcement will be made soon on www.metalfoam.net.

(1) Prof. Dr. John Banhart, October 2005, Hahn-Meitner-Institute, Berlin