Processing a foam work piece

Reference No: B74222

CHALLENGE
The invention relates to the market for metal foams, especially sheet metal-metal foam sandwich structures. Metal foams are a relatively new material, which is particularly characterized by its low density, high stability and good vibration damping properties. Metallic foams have not yet been established in a mass market, but are already used in special applications.

INNOVATION
A novel feature of the inventive process for the production of foam sandwiches is that the cover layer is produced by friction welding, whereas in conventional methods only the pores are compressed but not firmly connected to one another. The novel method, however, connects the pores, creating a surface which is dense with respect to gases and liquids. The inventive method specifically influences the resulting cover properties allowing for variation of parameters such as load bearing capacity and torsional strength.

COMMERCIAL OPPORTUNITIES
The invention is particularly suitable for producing so-called foam sandwiches made of steel or aluminum plates which comprise an aluminum foam core.

DEVELOPMENT STATUS
Feasibility was shown. Hochschule Kempten offers support for the implementation of the technology.

REFERENCES:
DE 10 2015 203 375