Patent Claims

1. Process for producing a plastics foam composite moulding,

characterized in that

one or more outer layers, comprising a thermoplastic material, a thermoplastic fibre composition, a thermoset material, a metal, a elastomer or a combination made of one or more of these materials and a solid poly(meth)acrylimide copolymer are introduced into a mould and then the poly(meth)acrylimide copolymer is foamed and bonds to the outer layer(s).

2. Process according to Claim 1,

characterized in that

the foaming is carried out at from 170 degrees Celsius to 250 degrees Celsius.

3. Process according to Claim 1,

characterized in that

a plastics foam composite moulding is produced in a single processing step.

4. Plastics foam composite moulding obtainable according to a process of patent Claims 1 to 3.

5. Plastics foam composite moulding according to Claim 4, comprising a poly(meth)acrylimide foam core and outer layers comprising a thermoplastic material, a thermoplastic fibre composition and/or a metal.

~~5.~~6. Use of the plastics foam composite moulding according to Claim 4 as component in spacecraft, aircraft, watercraft and land vehicles.

~~6.~~7. Use of the plastics foam composite moulding according to Claim 4 as energy-absorbing component in spacecraft, aircraft, watercraft and land vehicles.

~~7.~~8. Use of the plastics foam composite moulding according to Claim 4 as stabilizing component in spacecraft, aircraft, watercraft and land vehicles.