

Abstract

“Application of natural fibre materials in the interior of a car - status and development”

The weight of the components of motor vehicles plays a part of the CO₂ - discussion an increasingly important role. To reach this target it necessary to use material which has a low density and a low area weight. Weather door panels, instrument panels, floor consoles – every ounce counts. The intelligent combination of materials, sophisticated thin-wall construction elements and only slight material overlapping reduces the weight and cost of individual parts.

The use of natural fibers plays a special role in this field. They are used in the interior in fiber-reinforced carrier parts, which are laminated with a respective décor.

In the past there were different variance of NF products on the market, with thermoset binders and thermoplastic binder. This changed in past and in the future the thermoset products will decrease. The reason for this is, that the NF parts with a thermoplastic binder like PP can be combined with the injection molding process. This can happen with a classical injection molding machine or a press in combination with an injection molding unit. Both processes have their advantages and disadvantage.

One aspect is always to laminate the décor during the pressing process onto the NF carrier to reduce the process cost. The combination of pressing NF parts, injection mold behind retainers and to press the décor in a one process step is in development. For some thin textiles and PP thin film foils it works, for some not.

At the end of the product decision is the price of a component. For this reason, it is increasingly important also to simplify natural fiber products and to combine with other processes as far as possible.