
Comparison of working capacity of designs from composite materials with holes executed by puncturing and drilling

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The article shows prospects of composite materials application. We provide general concepts and terms of composite materials, the technology of the assembly of highly responsible and structural elements, drawbacks of the existing technology. An overview presents advanced tools for the composite materials processing. When using these tools the stress concentration around the drilled holes is reduced. The offered method of changing the assembly technology is illustrated by the results of experiments. It is shown that the prepreg obtained strength characteristics similar to those obtained on the uncured composite material. The results of the work can be used in rocket and space technology.

Key terms: composite material, filler, matrix, binder, the prepreg, curing, drilling, puncturing.

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