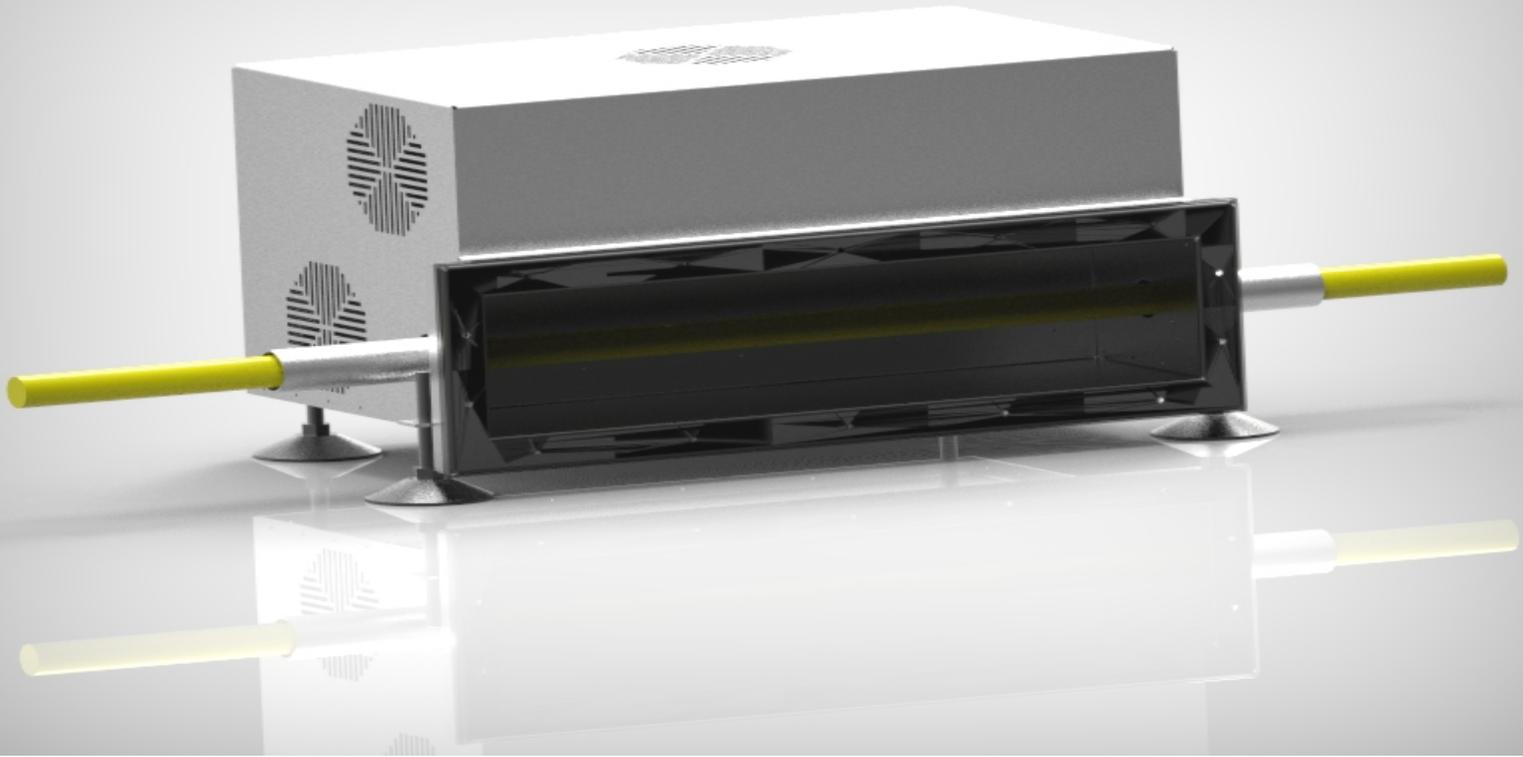


MICROWAVE PULTRUSION



TECHNOLOGY

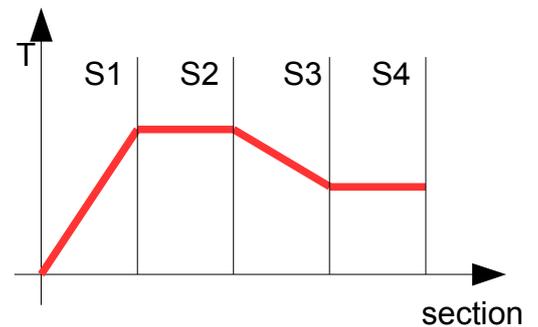
Curing of the resin material, which is saturated with fiberglass reinforcement, is the most important stage in the pultrusion process. Only using microwave technology it is possible to achieve effects that cannot be achieved by other methods. Microwaves penetrate deeply into the structure of the material, heating it evenly throughout the entire cross-section, accelerate the joining and ordering of polymer chains. The effect of microwaves is quick and effective hardening of resins.

The microwaves are led into a closed chamber through which the profile passes. The shape of the manufactured profile is limited only by the dimensions of the chamber. The profile drawn through the microwave chamber does not have to have a smooth surface, it can be finned, sanded or honeycombed.

PROCESS CONTROL

Pultrusion furnaces are divided into sections. Each section has the right amount of microwave sources. Each source with a power of 1 to 1,5 kW is smoothly regulated.

The user sets the process parameters and the automatic measurement and control systems supervise its correct course. The touch panel controller allows you to set, control, register and archive all parameters.



CONSTRUCTION AND APPLICATION



Only the curing process takes place in the microwave chamber, the profile is not formed, it also does not change shape. One chamber is used for hardening profiles of various shapes. At the entrance and exit of the chamber replaceable mouthpieces are mounted, similar in shape to the currently produced profile. The mouthpieces are to prevent microwave „leakage” and keep the profile in position.

ADVANTAGES

Microwave technology has many advantages, the most important of which are:

- ability to evenly cure profiles throughout their entire section,
- one chamber is used to manufacture a number of profiles of various shapes,
- simple adjustment and automatic supervision of the curing process,
- higher efficiency with lower energy consumption (from 30 to 50%),
- when changing the shape of the profile, it will only be necessary to replace the mouthpiece,
- the use of microwaves practically does not require changes in the design of an already working line.