

# Laser glass thermosplitting in mutually orthogonal planes

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This paper is dedicated to a new mode of glass separation with the help of continuous carbon dioxide lasers. The essence of the mode is in the joining into a single cycle of laser operated thermosplitting at the given depth and thermosplitting parallel with the surface. In this case, simultaneously with the split of the parallel glass surface, a microcrack spreads from the surface towards the depth of the glass in the quenching agent feeding zone. Glass thermosplitting takes place on two mutually orthogonal planes.

To make an optimum choice of technological parameters of the process of formation mutually orthogonal splits the information about the distribution of thermoelastic fields formed in the glass is necessary. For the solution of this problem the finite-element method was used.

## An examination of laser glass separation in the plane parallel to its surface

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