The invention relates to processes for manufacturing structures of metallic or nonmetallic materials by explosion. The process for manufacture by explosion of structures with microgrooves is realized in the following way: onto a support (1) there are installed sheets (2) and (3) (metallic or nonmetallic), between which there are placed microgroove forming elements (4), and onto the surface of the upper sheet (2) there is installed an explosive material (5), that is blasted by means of a detonator (6). As a result of explosion there takes place pressing of the sheets (2) and (3) and incorporation into the sheets (2) and (3) of the microgroove forming elements (4), as a result of which onto the surface of the sheets there are formed microgrooves and the sheets are welded, then the microgroove forming elements (4) are removed.

Claims: 3 Fig.: 7

