

ABSTRACT

Portions of a thermoplastic synthetic resin panel (B) formed by extrusion and integrally having a first sheet (2a), a second sheet (2b) parallel to the first sheet (2a), and a plurality of ribs (3) integrally joining the first and second sheets (2a, 2b) are welded together by ultrasonic welding by applying an ultrasonic welding head (6) and a work support block (7) of an ultrasonic welding machine to the first sheet (2a) and the second sheet (2b), respectively, and compressing the portions of the thermoplastic synthetic resin panel (B) between the ultrasonic welding head (6) and the work support block (7). When welding together two thermoplastic synthetic resin panels (B1, B2), at least portions of the panels (B1, B2) are put one on top of the other to form an overlapping section, an head (6C) and a work support block (7C) are applied to the opposite surfaces of the overlapping section, respectively, and the head (6C) is driven to generate ultrasonic waves, compressing the overlapping section between the ultrasonic welding head (6C) and the work support block (7C). The overlapping section vibrates, generates frictional heat therein, and is welded under compression.