

Optimization of Adhesive Layer Thickness at Metal Bonding Using Quick-Setting Adhesives

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In the contribution the results of bonded joints laboratory tests are published. For bonding of test samples five different types of quick-setting adhesives were used. The determination of the tensile lap-shear strength of rigid-to-rigid bonded assemblies according to the standard CSN EN 1465 (66 8510) was the aim of carried out tests. The samples were made from steel and duralumin sheets. Ahead of bonding the surfaces of all samples were blasted using corundum grit and degreased. Bonded joints of different adhesive layer thickness were tested. The layer thickness was secured using two copper wires of the appropriate diameter, which were placed between the bonded surfaces. By the test results evaluation the optimum adhesive layer thicknesses were determined, when the concrete bonded joint strength is the highest.

Keywords: adhesive bonding, quick-setting adhesives, technological properties of adhesives, testing of bonded joints

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