



Reinforcement of Round Holes in Glulam Beams Arranged Eccentrically or in Groups

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Summary:

Experimental and numerical investigations on round holes in glulam beams are presented. These were conducted in order to extend the field of practical application, to study the structural behaviour of holes arranged eccentrically or in groups and to generate basic results for deriving a design format. Within these investigations the influence of parameters like eccentricity, clear distance between holes or effect of reinforcement by fully threaded selftapping screws was considered. A comparison of estimated load-bearing capacities on the basis of the Weibull theory and test results shows good agreement. Strain gauge measurements in reinforcing elements confirm the validity of the chosen methods.

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