



## GL Beams Reinforced with Plywood in the Outer Layer

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Author: Dziurka, Dorota  
 Derkowski, Adam  
 Wieruszewski, Marek  
 Kulinski, Marcin  
 Mirski, Radoslaw

Organization: Poznan University of Life Sciences

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**Summary:**

Glulam beams are increasingly used in the construction industry because of their high strength and the possibility of using round timber with smaller cross-sections. The load-bearing capacity of beams is strongly related to the quality of the outer layers and, in the case of wood, especially the tension zones. For these reasons, this study decided to replace the outer lamella with tensile plywood. The produced beams were subjected to static bending strength and modulus of elasticity evaluation. It was shown that the best static bending strength values were obtained for beams containing plywood in the tension layer. However, the change in structure in the tension zone of beams made of glued laminated timber results not only in an increase in the load capacity of elements produced in this way but also in a decrease in the range/range of the obtained results of bending strength. This way of modifying the construction of glued laminated beams allows a more rational use of available pine timber.

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