

## FULL AND PARTIAL STRUCTURES OF HISTORICAL ROOF TRUSSES IN ASSESSMENT OF VOLUME OF TIMBER USED FOR CONSTRUCTION

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### Abstract

Rafter framing is the basic roof frame that, through the trusses, transfers the load from the roofing to the main supports of the building. The construction material of these structures is usually wood. The development of roof framing construction for wider and wider covers has caused an increased demand for construction timber for their construction. This paper points to this economic aspect based on an example of a geometric pattern of a rafter framing based on repetitive construction of full and partial girders. For such an understanding of the use of simple trusses by carpentry masters who constructed roof framings in past centuries, it is pointed out in Ryszard Ganowicz's works titled "Historical roof trusses of Polish churches" with section by Piotr Rapp's "Historical development of roof structures in Polish churches". This work is intended to provide an initial estimate of the percentage of wood saved in this solution. This assessment will be made on the basis of the inventory documentation of the roof framing of the church of the Michael the Archangel Church in Wierzbnik.

Keywords: **Historic buildings; Rafter framing; Roof framings; Modular construction.**