

**COST**



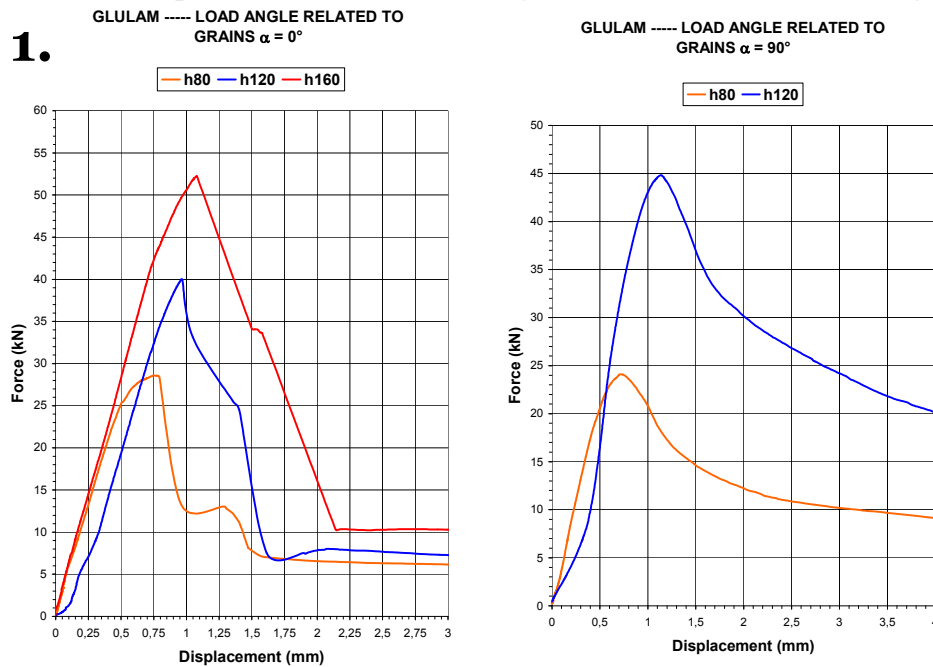
# Modelling of the Performance of Timber Structures

**COST Action E55**

**Prof.dr. Vlatka Rajčić, Str.Eng.**



# Comparison of the Pull - out Strength of Steel Threaded Bars Glued in GluLam elements Obtained Experimentally, Numerically and Analytically

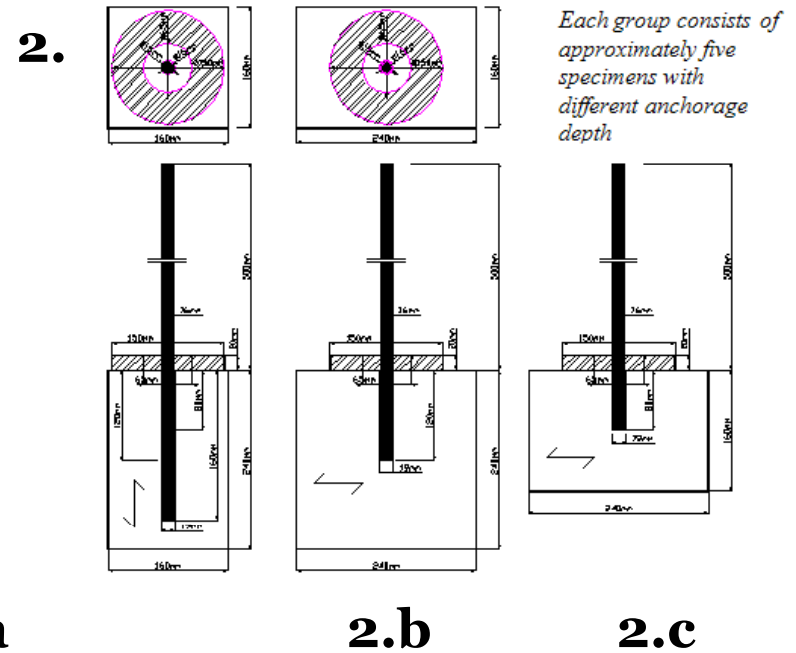


(a) Test Load Angle  $\alpha = 0^\circ$  (b) Test Load Angle  $\alpha = 90^\circ$

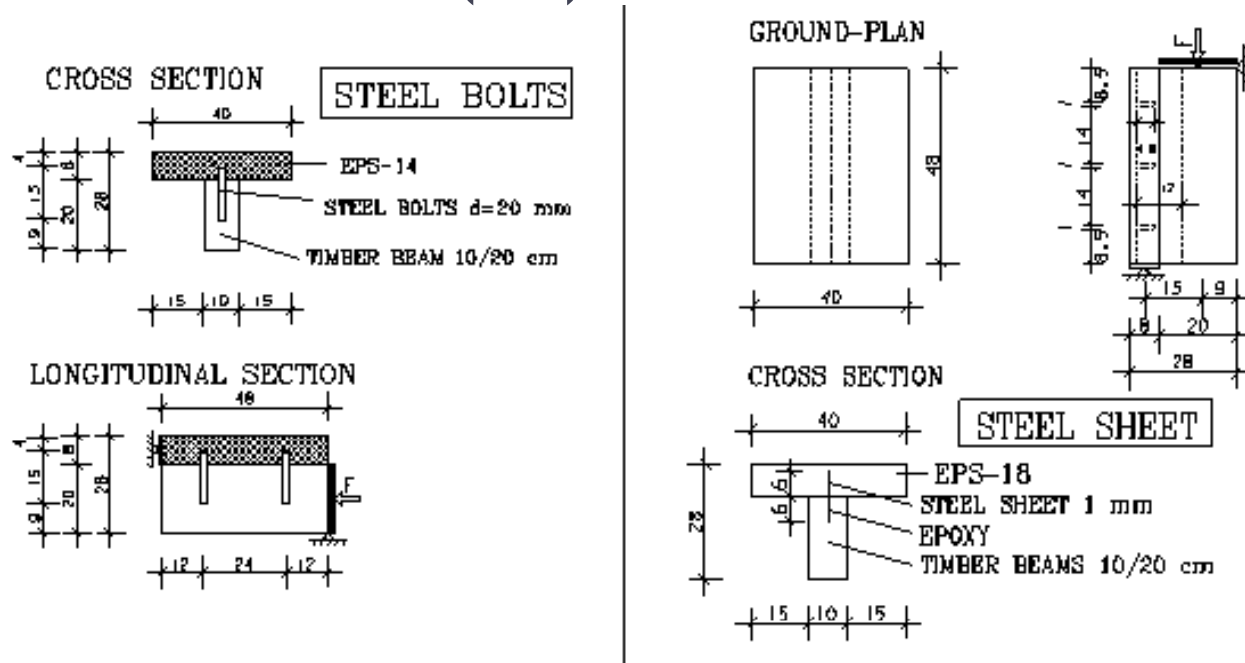
**Figure 1.** Experimental results: The behaviour of joint represented by the  $F-D$  diagram for various load angle ( $\alpha$ ) and anchorage depth ( $H$ )

**Figure 2.** Shapes of tested groups of specimens with load angle of  $0^\circ$  and  $90^\circ$

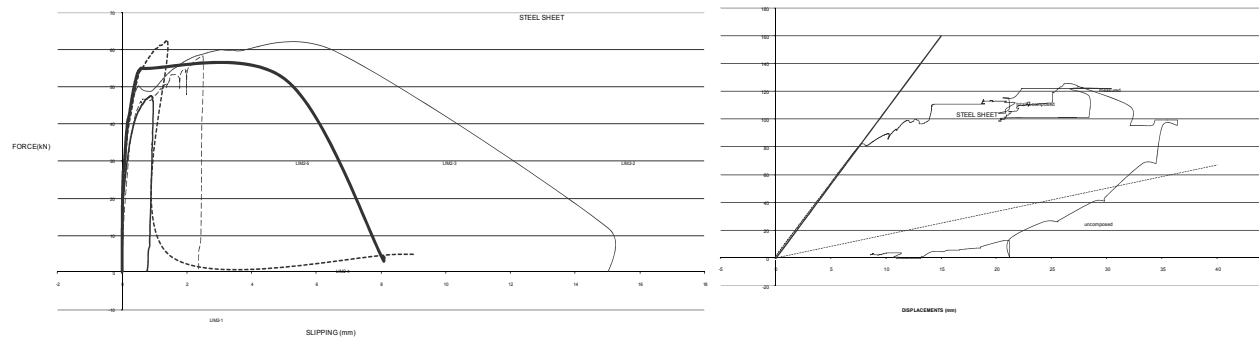
**Figure 3.** Failure modes of joint strength a) 1<sup>st</sup> mode b) 2<sup>nd</sup> mode c) 3<sup>rd</sup> mode



# CONTINUOUS SHEAR CONNECTING BETWEEN TIMBER AND LIGHTWEIGHT (EPS) CONCRETE

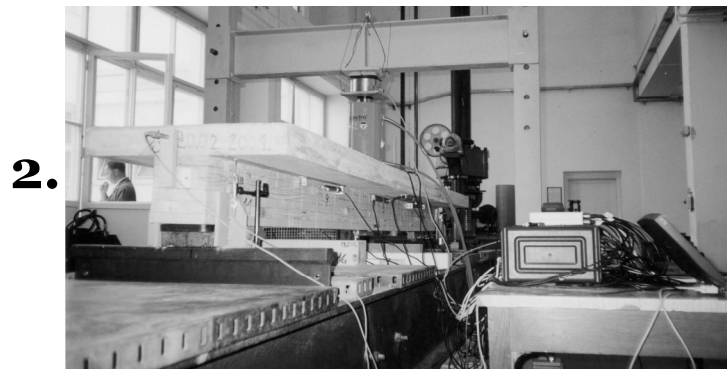
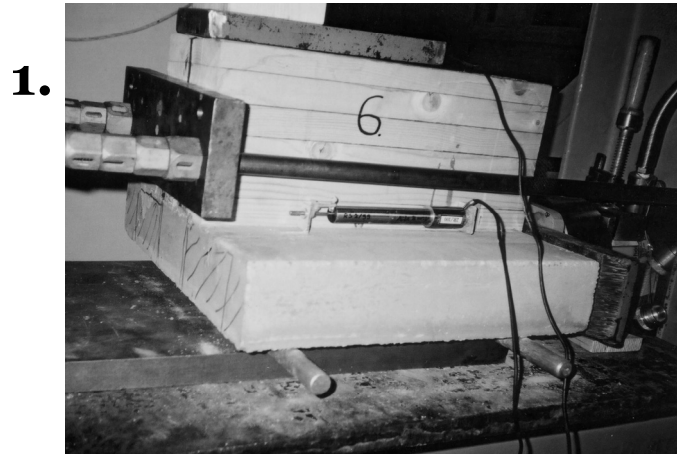


*Figure 1. Types of shear connectors researched in this paper shown in shear test*



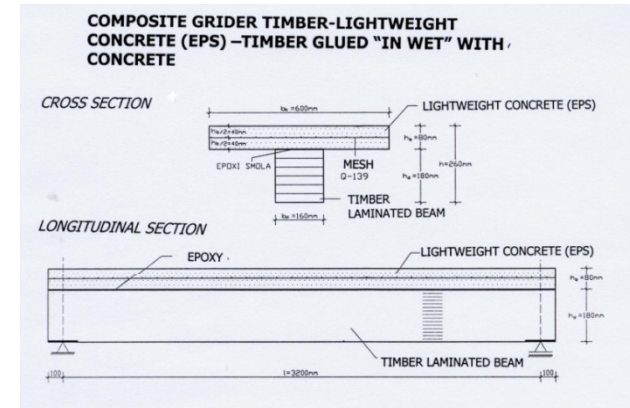
*Figure 2. Force-slipping curve from shear tests for all researched type of shear*

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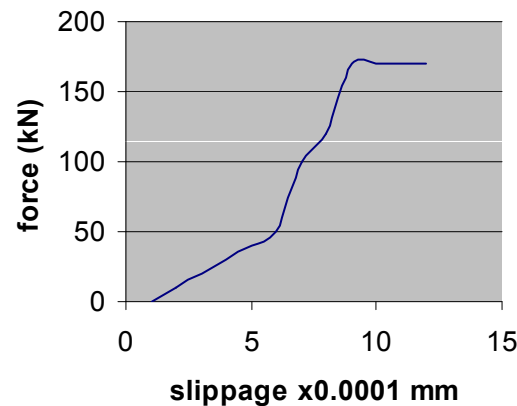


**Figure 1.** Photo of the shear test  
**Figure 2.** Photo of the floor section with measuring devices  
**Figure 3.** Geometry of the composite floor section

3.



force-slippage diagram



**Figure 4.** Force-slipping curve from shear tests