

# **MONITORING OF PRESSING PROCESS IN ADVANCED FORMWORK COMPOSITES II.**

**2017, September 6<sup>th</sup>**

Zagreb, University of Zagreb, Faculty of Forestry

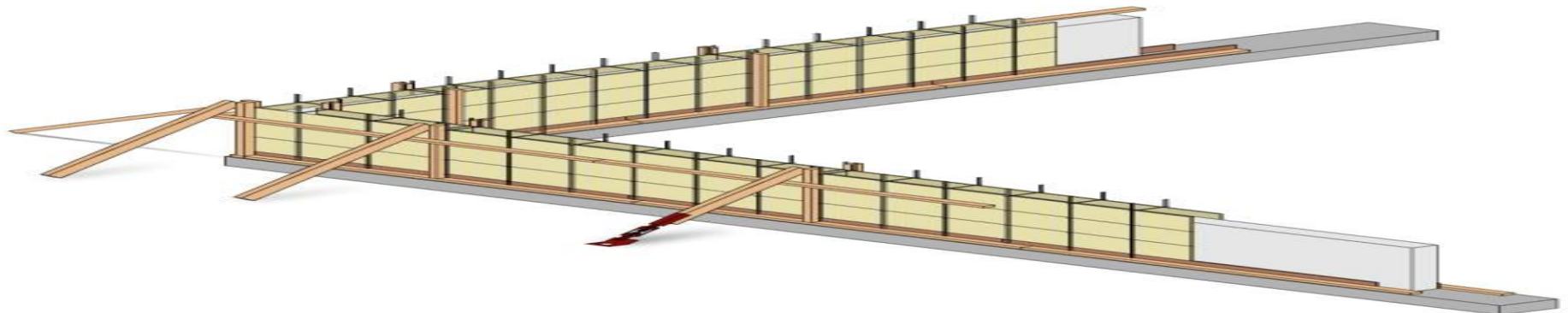
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# INTRODUCTION

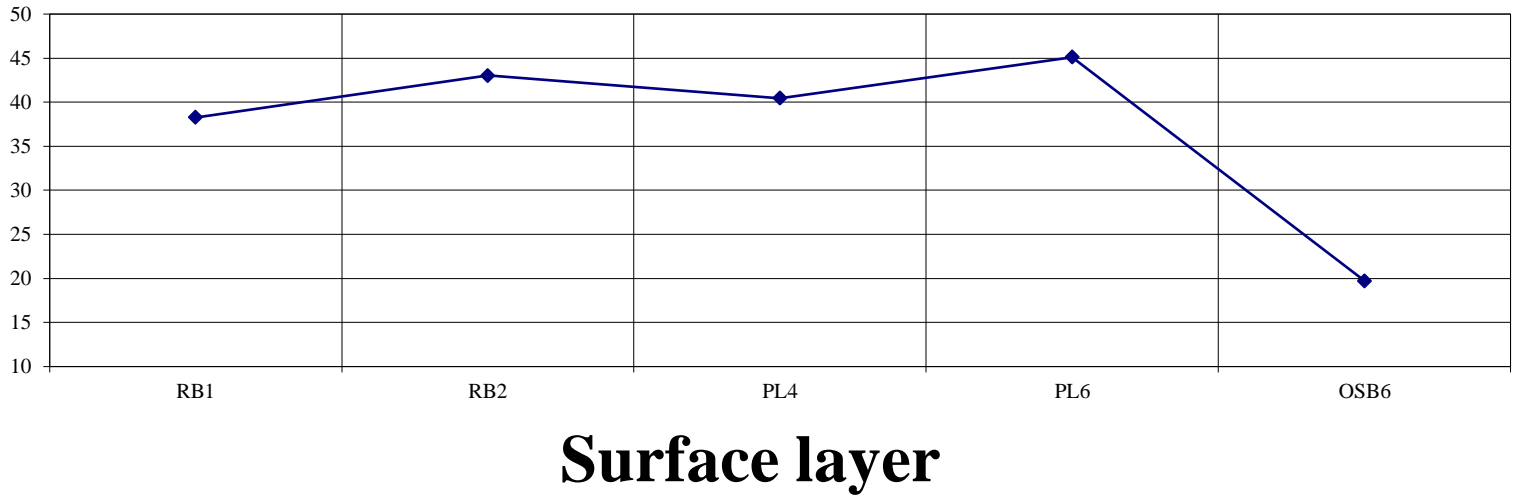
- Monitoring of Pressing Process in Advanced Formwork Composites I.
- Published in the Proceedings from the COST Action FP1303 Conference in Kranjska Gora in 2014
- The aim of our long-term research: to optimize the pressing process of wood composites used for the production of formwork.
- This **second part** of the research is aimed to the evaluation of the **mechanical properties of formwork composites** produced as the result of time optimization of the technological operation of their pressing

- four structures of three-layer formwork composites
- spruce slats with a thickness of 9 mm were used in all structures as the core layer
- surface layer were formed by four alternatives:
  - a. 3-ply birch plywood, thickness of 4 mm (PL 4)
  - b. 3-ply birch plywood thickness of 6 mm (PL 6)
  - c. OSB thickness of 6 mm (OSB)
  - d. RB1 and RB2 - reference type of boards with spruce slats of 6 mm in the surface layer pressed in the laboratory or taken from the factory and just tested in the laboratory

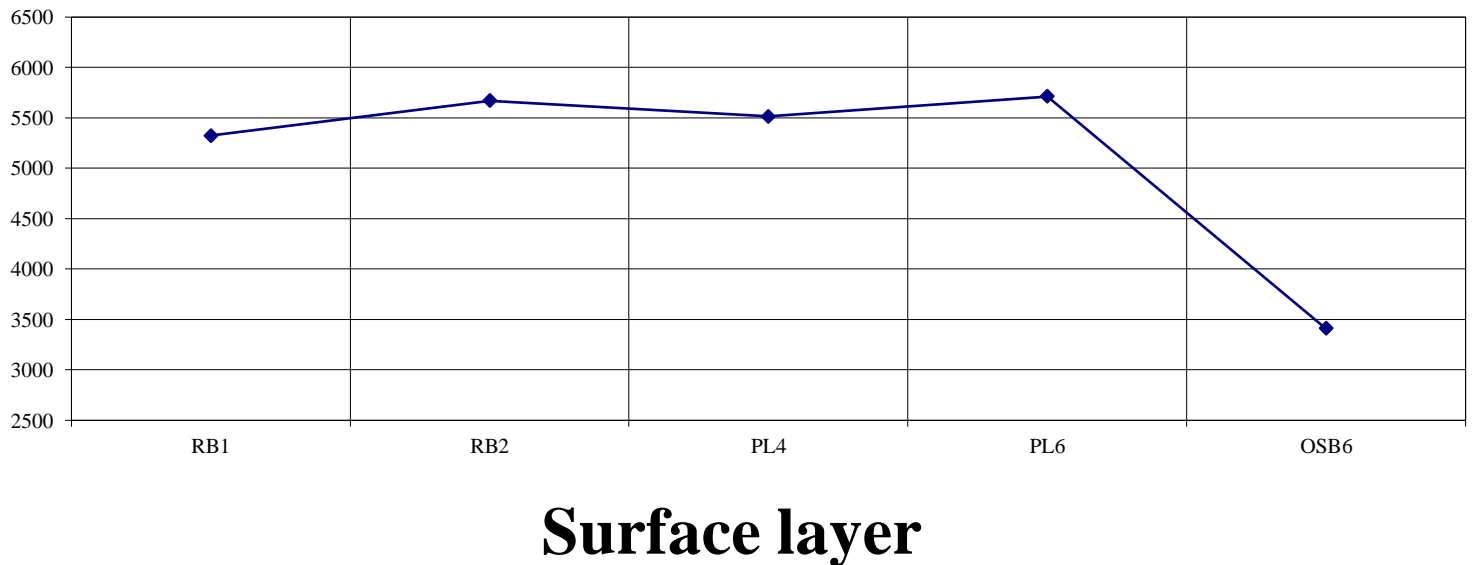


# RESULTS AND DISCUSSION

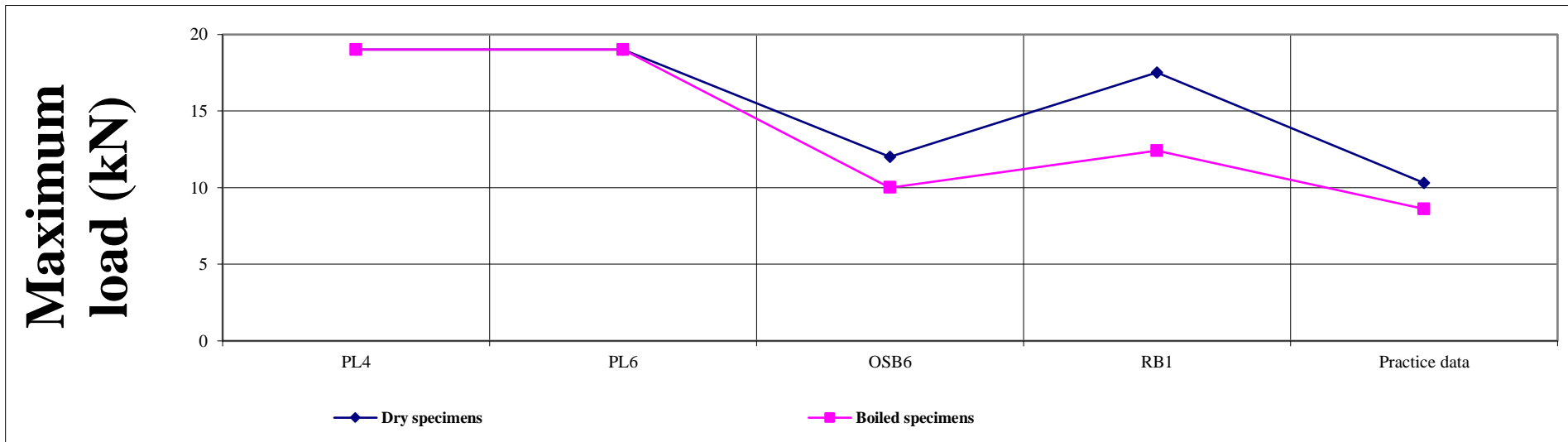
**Bending  
strength  
for 21 mm  
boards (MPa)**



**MOE for 21  
mm boards  
(MPa)**



# RESULTS AND DISCUSSION



Bonding test of the four formwork composites depending on the alternative surface layers used (Zwick/Roell 2020)

# CONCLUSIONS

- 3-layer composite formwork should have firm solid surface layers
- birch plywood is a suitable material for this purpose



## Thank you for your attention.

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