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Publisher *Taylor & Francis*

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The Journal of Adhesion

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713453635>

Book Reviews

To cite this Article (1970) 'Book Reviews', The Journal of Adhesion, 2: 3, 240

To link to this Article: DOI: 10.1080/0021846708544597

URL: <http://dx.doi.org/10.1080/0021846708544597>

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BOOK REVIEWS

"Effect of the Humidity of Air and Wood on the Strength of Adhesive Joints" [Russian]. N. V. Vashchev. Forest Industry Publishers, Moscow 1966. 88 pp. Rub. 0.26.

The first half of the booklet is a literature review, and the second half is a detailed report of the author's tests on the moisture sensitivity of joints between wood adherends. Oak and pine bars and plywood plates of oak and beech were used as adherends, and a bone glue, a casein glue, and two urea-formaldehyde resins served as adhesives. The results were subjected to a statistical treatment but no physical or chemical explanation of the observations was attempted. The experimental part seems to deserve a translation or, at least, a detailed abstract in one of the special magazines (e.g., *Forest Products Journal*).

J. J. Bikerman

"Adhesive Fastening of Wood Materials to Plastics and Metals" [Russian]. L. M. Kovalchuk. Forest Industry Publishers, Moscow 1968. 240 pp. Rub. 0.93.

The book is descriptive rather than analytical. Chapter I describes many adhesive joints between a wood and a non-wood member (for instance, between a steel rail and a timber crosstie), the adhesives used in these joints, and the technique of joint formation; all on the basis of non-Russian publications. Chapter II deals with the special requirements caused by the fact that the two adherends are different. The internal stresses are discussed in qualitative terms only; this signifies a progress, as in many similar manuals the stresses are not mentioned at all. A brief listing of some mechanical constants of timber, plastics, and metals also is given there. The main adhesives employed for wood joints are the subject of Chapter III. The next chapter is the longest in the book and reviews the operations resulting in joint formation, including the safety aspect. Chapters V and VI are on gluing at higher temperatures, the heating being external or internal. The principles of the latter (i.e., of induction heating) are presented in quantitative form; of the 26 numbered equations in the monograph, 19 refer to these principles. Next, attachment of metal foils and plastic films to wood is reviewed. Finally, instructions on testing the adhesives and the completed joints are given. There are 107 references, mainly to trade publications (e.g., *Woodworking Digest*).

If it were possible to market an English edition of the book at the price of the original (\$1.03), I would have recommended a translation, as nothing better seems to exist on the subject.

J. J. Bikerman