

[Available Issues](#) | [Instructions to Authors](#) | [Japanese](#) >> [Publisher Site](#)Author: [ADVANCED](#) | Volume Page
Keyword: [TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1880-1986

PRINT ISSN : 1346-8235

Journal of Textile Engineering

Vol. 53 (2007) , No. 3 101-105

[\[PDF \(3895K\)\]](#) [\[References\]](#)

Effect of Binder on the Properties of Board Molded from Fiber Assembly

[Seiji HATTA](#)¹⁾, [Teruo KIMURA](#)¹⁾ and [Wataru KIKUNO](#)¹⁾

1) Division of Advanced Fibro-Science, Kyoto Institute of Technology

(Received July 31, 2006)

(Accepted for publication March 28, 2007)

Abstract: It is estimated that about tow million tons of used fiber are discharged annually in Japan. This situation has raised the concerns about the necessity to find innovative usage of used fibers and new recycling technologies. Therefore, various attempts have been carried out in our textile industry to construct the recycling-type society.

For example, compression molding system of lumber substitutive materials by using the fiber wastes as raw material is very interesting. In this molding process, the binder material such as thermoplastic fiber is used in order to bind the neighboring fiber wastes. It can be easily expected that the shape of melted binder remarkably affects on the mechanical properties of substitute lumber.

In this paper, the felt is pre-molded in which PP fibers with various sizes are added as a binding material. Then the felt turns to fiber board by the compression molding method under heating. The effects of binder shape to the bending properties of the fiber board are discussed.

As a result, it is clarified that the fiber sizes of PP binder remarkably affects on the shape of melted PP and also the bending properties of molded board.

Key Words: [Fiber waste](#), [Substitute lumber](#), [Board](#), [Shape of binder](#), [Bending property](#)

[\[PDF \(3895K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)

To cite this article:

Seiji HATTA, Teruo KIMURA and Wataru KIKUNO, J. Text. Eng., Vol. **53**, p.101 (2007) .

JOI JST.JSTAGE/jte/53.101

Copyright (c) 2007 by The Textile Machinery Society of Japan



[Japan Science and Technology Information Aggregator, Electronic](#)

