

Mokuzai Gakkaishi  The Japan Wood Research Society

Available Issues | Japanese >> Publisher Site

Author: Keyword: ADVANCED



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1880-7577

PRINT ISSN : 0021-4795

Mokuzai Gakkaishi

Vol. 51 (2005) , No. 4 p.227-233

[\[Image PDF \(1015K\)\]](#) [\[References\]](#)

Variation in Moisture Content of Sugi Boxed Heart Timber in Miyazaki Prefecture during Kiln Drying under High Temperature and Low Humidity II.

Distribution and change of moisture content

Hisato ODA¹⁾, Yoshifumi EBIHARA¹⁾, Tadayoshi SAKODA¹⁾, Noboru FUJIMOTO²⁾ and Yasuhide MURASE²⁾

1) Miyazaki Prefectural Wood Utilization Research Center

2) Graduate Schools of Agriculture, Kyushu University

(Received September 21, 2004)

(Accepted January 24, 2005)

Abstract: Sugi (*Cryptomeria japonica* D. Don) boxed heart timbers from Miyazaki prefecture were kiln-dried at low humidity under two high-temperature conditions. The distribution of moisture content, changes in moisture content and the generation of internal checks were examined. Our findings are summarized as follows :

- 1) In the examination with an intermediate period of steaming, a large difference in moisture content was observed depending on green timber weight. Each layer of timbers of 34 to 36 kg had a moisture content of about 6%, and layers of timber of 37 to 39 kg had a final moisture content ranging from about 6 to 40%.
- 2) In the examination with a surface-drying stage at a dry-bulb temperature of 75°C and a wet-bulb temperature of 68°C, variation of moisture content in the cross section were almost equalized during the steaming process that followed this stage.
- 3) The amount of moisture content reduction per hour during drying at a dry-bulb temperature of 120°C was about equal at 1.2 to 1.6% for both drying methods.
- 4) Internal checks seemed to be generated near moisture content of 30 to 40%.

Keywords: sugi, kiln-dry, high temperature, moisture content, internal check

To cite this article:

Hisato ODA, Yoshifumi EBIHARA, Tadayoshi SAKODA, Noboru FUJIMOTO and
Yasuhide MURASE: Mokuzaishi Gakkaishi Vol. 51, No. 4, 227-233 (2005) .

doi:10.2488/jwrs.51.227

JOI JST.JSTAGE/jwrs/51.227

Copyright (c) 2006 by The Japan Wood Research Society



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

