

NON-MANUFACTURED WOOD PACKING PROGRAM

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Good afternoon! It's been a few years since I've addressed the Western Dry Kiln Association and I must say there have been numerous changes in our industry since my last visit. Today I will talk about one of those changes and the impact it had on our industry and your association. My topic today deals with the KD/HT certification programs and specifically the program history, present program and a look at what may be coming in the future.

History of KD/HT Program

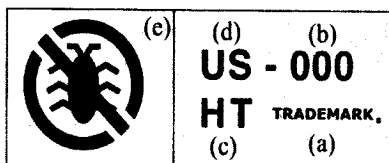
To aid in the prevention of spreading unwanted pests and diseases to the European Community and other foreign countries, the U.S. timber industry for many years has covered export lumber shipments with certification programs. The Bark Removal and Grub Hole Control Certification Program was implemented in 1990. Then in 1992 the Kiln Drying Documentation Program began and in 1993 the Heat Treating Certification Program was introduced. These three certification programs are administered through a Memorandum of Understanding with the USDA Animal Plant Health Inspection Service (APHIS) and authorized grading agencies. The Heat Treating Certification Program requires that all lumber be heat treated in a dry kiln to achieve a minimum core temperature of 56° Celsius (133° Fahrenheit) for 30 minutes. The program can also be used for lumber that has been kiln dried to achieve moisture content of 20% or less. This works well for export shipments as the time/temperature requirement (56/30) satisfies the concerns of most importing countries. The Heat Treating Certification Program has worked very well for primary producers but was never intended for secondary manufacturers.

Non-Manufactured Wood Packing (NMWP) Program

In the spring of 2000 several foreign countries voiced concerns about the spread of the pinewood nematode in lumber used in manufacturing pallets and crates. The pinewood nematode is a microscopic eelworm, which has caused extensive mortality in pine species in Japan and China. That concern led to the Peoples Republic of China requiring all packaging material to be heat-treated. The European Union also announced that it would impose emergency measures for coniferous solid wood packaging material originating in China, Japan, Canada and the United States to reduce the spread of the pinewood nematode.

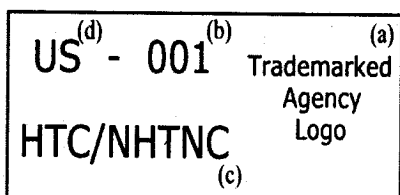
As a result of those actions the American Forest & Paper Association (AF&PA), North American Plant Protection Association (NAPPO), U.S. Animal Plant Health Inspection Service (APHIS), American Lumber Standards Committee, Inc. (ALSC) and other interested groups worked together on developing a world standard to deal with this issue. In the Fall of 2001 the Non-Manufactured Wood Packing program was developed. ALSC, APHIS and approved grading agencies have the regulatory responsibility for the NMWP program, which requires pallet and crating manufactures to enroll with a grading

"Non-Bug" Heat Treated Mark



- a. *Trademark* – the identifying symbol, logo, or name of the accredited agency
- b. *Mill Identification* – product manufacturer name, brand or assigned mill number
- c. *Heat Treated* mark
- d. *Country Code* – the two letter ISO country abbreviation
- e. Approved International symbol for compliant non-manufactured wood packing

Combination Mark Used on Heat Treated Conifer and Non-Heat Treated Non-Conifer



- a. *Trademark* – the identifying symbol, logo, or name of the accredited agency
- b. *Mill Identification* – product manufacturer name, brand or assigned mill number
- c. *Heat Treated Coniferous / Non-Heat Treated Non-Coniferous (HTC/NHTNC) Mark*
- d. *Country Code* – the two letter ISO country abbreviation

FIGURE 1. Quality marks presently used on NMWP.

agency affiliated with ALSC and use HT-marked lumber from approved lumber companies. When qualified, NMWP subscribers will be issued a stamp for use on their products (Figure 1). Primary lumber companies have several stamping options for their products to cover the requirements of the NMWP program (Figure 2).

HT Monitoring

Dry kiln records of WWPA members that have stamps with the HT or KDHT designation are inspected monthly to insure the HT time/temperature requirements have been met. Dr. Kevin Cheung, Director of our Technical Services department, developed a time/temperature reference chart that our inspection staff uses when checking dry kiln records. For simplicity, the requirements are based on conservative parameters accounting for the potentially wide range of mill operating conditions. We use the U.S.D.A. Forest Products Laboratory General Technical Report FPL - GTR - 130 "Heating Time for Rectangular and Round Cross Section of Wood in Steam" by William T. Simpson, published in September 2001 as a basis for time/temperature requirements. This publication provides tables for the heating time (in steam) and temperature requirements for the purpose of killing undesirable pests in import/export lumber, timber and rounds. The variables considered are wood specific gravity, moisture content, initial temperature, heating temperatures (wet steam is the required medium) and wood dimensions. The

heating times provided in the Forest Products Laboratory report were calculated from a model verified by heating experiments. Lumber specimens of various thickness up to 6" were used in these experiments. Additional experiments are underway at FPL where Douglas-fir and ponderosa pine lumber of thickness up to 12" are being tested. Early results indicate that the model used is predicting heating times as expected.

Future Possibilities

Hardwood lumber is presently exempt from the EU emergency measure. However, the International Plant Protection Convention (IPPC), which is recognized by the World Trade Association as the official international plant protection organization, is now considering a draft international standard that would require both coniferous and hardwoods be heat-treated, fumigated or pressure-impregnated for pallets and other non-manufactured wood packing products. The IPPC is a multilateral treaty deposited with the Director-General of the Food and Agricultural Organization of the United Nations. One hundred and sixteen countries, including the United States, are included in the IPPC. APHIS recommends the use of the heat-treatment method, as it is the only "long term measure" currently listed in the IPPC standard.

According to the National Wooden Pallet and Container Association, an estimated 454 million pallets were produced in the United States in 1999, consuming upward of 7 billion board feet of lumber. Approximately 65% of that total was hardwood lumber, which for the most part is presently a non-treated product. If the IPPC standard is adopted in its present form it will open the door for more heat-treating, especially in the hardwood species. This could create some new challenges and opportunities for the dry kiln industry and your association.



FIGURE 2. Heat treated grade stamps.