

U.S. Hardwood Passes The Test in Europe

By William Bomersheim

As a result of an FAS-U.S. hardwood industry partnership, American white oak now has documented structural test values for the European market. Architects and engineers in Europe can now design structures with American white oak, knowing exactly how it will perform.

However, this was not always the case. Recognizing an opportunity, David Venables, European director for the American Hardwood Export Council (AHEC), utilized FAS' Quality Samples Program (QSP) in combination with FAS' Market Access Program (MAP) to put several U.S. hardwood species to the test in Europe—

thereby obtaining vital data needed to open up American hardwoods to new applications and audiences in Europe.

The Opportunity

Venables became interested in this project when he learned that British architect Sir Michael Hopkins and structural engineering consultant Ove Arup were using U.S. hardwoods to design a courtyard roof for Portcullis House, a new office complex for Britain's members of Parliament. After exploring several different materials, the Portcullis House design team decided to use American white oak because it enabled them to design an esthetically pleasing structure with a sense of tradition that also could meet heavy load requirements.

However, the Portcullis team faced an important obstacle because the necessary strength data for American white oak were



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not available in the relevant European standards—namely, European Norm 338, which sets out strength codes (known as D ratings) for different wood species.

To overcome this hurdle, the Portcullis House team commissioned its own tests for American white oak.

When Venables learned about the testing, he realized that if this structural test data could be made publicly available and incorporated into the relevant European norms, it would facilitate the use of American hardwoods in more building projects. This would be especially helpful in work where interior or exterior structural elements such as decking, beams, window frames, door frames and staircase components feature prominently.

According to Venables, “The lack of approved structural data on U.S. species in the European standards was not necessarily a barrier to using U.S. hardwoods, but it did present us with an important marketing opportunity.”

Consequently, AHEC decided to commission a European testing organiza-



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tion to conduct similar tests for American white oak, thereby obtaining D ratings that were incorporated into the relevant European standards.

“We wanted to ensure that structural data on U.S. species can be accessed by all architects and structural engineers throughout Europe, however large or small the project,” said Venables.

Following the successful completion of the American white oak tests, AHEC also commissioned structural testing of American red oak, ash and tulipwood (yellow poplar), and plans to submit the data for inclusion in the European standards as well.

FAS Programs Make the Difference

The challenge for AHEC was determining how to purchase wood (over 800 full-sized lumber boards) needed for testing and secure a contract with a recognized European authority. That is where FAS made the difference. AHEC presented its idea to FAS and ultimately used funds from two FAS marketing programs. Samples were provided for testing through the QSP, while the testing was paid for in part by the MAP.

Under the QSP, U.S. exporters typically buy commodity samples, export them and provide technical assistance on their use to importers. USDA reimburses the exporters for the cost of procuring and exporting the samples.

The QSP helps U.S. agricultural trade organizations expand markets for U.S. products by providing small samples to key players overseas.

In this case the wood used for testing was purchased in England from two U.K. distributors carrying U.S. hardwood stock, thus eliminating the need for QSP to pay for shipping costs.



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Tests Generate Publicity

The testing has opened up a new market segment for U.S. hardwoods in Europe, and also created publicity for AHEC and American hardwoods in the architectural and construction media.

In addition, the project that inspired Venables to do the evaluations in the first place went on to win a prestigious U.K. architectural award. Publicity surrounding the successful design—and its use of U.S. white oak—generated further good press for U.S. hardwoods.

A special feature on the use of American white oak in the Portcullis House project and press releases on the testing produced over 80 articles in 10 European countries. Many articles appeared in magazines that had not previously focused on American hardwoods, thus introducing them to new audiences. The resulting publicity allowed AHEC to promote U.S. species and its technical publications to thousands of architects.

Mike Snow, AHEC executive director, summed up the success of this project:

“This story is a perfect example of how USDA funding can support industry initiatives to create new opportunities in export markets.” ■

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