Development of visual and mechanical sorting tools for the enhancement of structural sawn timber



Structural sawn timber intended for construction must offer similar guarantees to those offered by other materials and products intended for the structural construction sector. For this purpose, it is necessary to develop classification tools that allow manufacturers and marketers to certify the strength and stiffness values of all the wood that is placed on the market (adjusted to the species and origin that corresponds).
It is, in addition to being a legal obligation, a tool for the valuation of wood that is enabling a competitive improvement of its industrial network.

Technological development of structural sawn timber not only enables it to be directly promoted in the construction sector as a construction element, but also to be incorporated into the manufacture of technological products with high added value, such as glued laminated timber, duos, trios, CLT, prefabricated panels... These are high value-added products that require high levels of competitiveness that cannot be achieved without their main raw material, structural sawn timber, increasing its competitiveness, optimising its manufacturing times and its declared mechanical properties

Visual classification tools have been developed for the main commercial wood species found in Spanish forest stands, such as Pinus sylvestris, Pinus insigne, Pinus nigra, Pinus pinaster, Abies alba, Pseudotsuga menziesii, Quercus rubra, Castanea sativa and Eucalyptus globulus. Tools that in many cases enable the possibility of classifying structural sawn timber into three structural qualities, which allows the different qualities of wood that the timber industry places on the construction market to be classified and valued.
Mechanical classification systems are currently being developed for the main species of the Pinus genus. This is one more step in the competitive improvement of this type of wood, as it improves the classification times and the classifying performance in the different mechanical qualities.

Both developments have enhanced the value of the wood of the different wood species characterized, and have promoted its use in construction.

DéTAILS

ORIGINE DU BOIS
Industrie

TYPE DE BOIS
Grume

TYPE DE BOIS CONCERNé
Pinus sylvestris, Pinus nigra, Pinus radiata, Pinus pinaster, Pseudotsuga menziessii, Larix sp, Quercus rubra, Abies alba

IMPACT SUR L'ENVIRONNEMENT ET LA BIODIVERSITé
Positive, it mobilizes wood with a proper forest management

EFFET SUR LE REVENU
Positive, more quality timber is mobilized

POTENTIEL D'EXPLOITATION
--

HUB
--

IMPACT éCONOMIQUE
Structural timber value increases in 10€/m3 approximately

CONNAISSANCES SPéCIFIQUES REQUISES
Knowledge about Phisical-mechanical properties of wood. Harmonized rules

POTENTIEL DE MOBILISATION
300,000 m3

POTENTIEL DE DURABILITé - VALEUR
--

FACILITé D'IMPLéMENTATION
Very easy

FACILITé D'IMPLéMENTATION - ÉVALUATION
--

PRéREQUIS CLéS
Experience on manufacturing and classification of structural timber

TYPE D'éVéNEMENT Où CETTE ICPE A éTé PRéSENTéE
--

EFFET SUR L'EMPLOI
Positive through better competitiveness

COûTS D'IMPLéMENTATION (EURO - €)
--

needed

PLUS DE DéTAILS

DéFI CONCERNé

--

DOMAINE

Industries basées sur la forêt, bioéconomie, économie circulaire

Industrie du bois de construction

TYPE DE SOLUTION

--

MOTS-CLéS

--

SOLUTION DIGITALE

Non

INNOVATION

Non

PAYS D'ORIGINE

Espagne

ECHELLE D'APPLICATION

Nationale

DéBUT ET FIN D'ANNéE

2011 -

INFORMATIONS DE CONTACT

PROPRIéTAIRE OU AUTEUR

edgar.lafuente@cesefor.com

RAPPORTEUR

REFERENCES AND RESOURCES

SITE WEB PRINCIPAL

http://www.cesefor.com

SITE WEB DU PROJET

--

RéFéRENCE DU PROJET

--

RESSOURCES

--

PROJET SOUS LEQUEL CETTE FICHE D'INFORMATION A éTé CRééE

Rosewood

DATE DE PUBLICATION

30 aoû 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY