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.

DETALHES

ORIGEM DA MADEIRA
Industria

TIPO DE MADEIRA
Tronco

TIPO DE MADEIRA EM CAUSA
Pinus sylvestris, Pinus nigra, Pinus radiata, Pinus pinaster, Pseudotsuga menziessii, Larix sp, Quercus rubra, Abies alba

IMPACTE NO AMBIENTE E BIODIVERSIDADE
Positive, it mobilizes wood with a proper forest management

IMPACTE NAS RECEITAS
Positive, more quality timber is mobilized

POTENCIAL DE EXPLORAçãO
--

HUB
--

IMPACTE ECONOMICO
Structural timber value increases in 10€/m3 approximately

CONHECIMENTOS ESPECIFICOS NECESSáRIOS
Knowledge about Phisical-mechanical properties of wood. Harmonized rules

POTENCIAL DE MOBILIZAçãO
300,000 m3

SUSTENTABILIDADE POTENCIAL - VALOR
--

FACILIDADE DE IMPLEMENTAçãO
Very easy

FACILIDADE DE IMPLEMENTAçãO
--

PRE-REQUISITOS CHAVE
Experience on manufacturing and classification of structural timber

TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO
--

IMPACTE NO EMPREGO
Positive through better competitiveness

CUSTOS DE IMPLEMENTAçãO (EURO - EUR)
--

needed

MAIS DETALHES

DESAFIO ABORDADO

--

DOMíNIO

Industrias do sector florestal, bioeconomia circular

Industria da madeira para construção

TIPO DE SOLUçãO

--

PALAVRAS-CHAVE

--

SOLUçãO DIGITAL

Não

INOVAçãO

Não

PAíS DE ORIGEM

Espanha

ESCALA DE APLICAçãO

Nacional

ANO DE INíCIO E FIM

2011 -

DADOS DE CONTACTO

PROPRIETáRIO OU AUTOR

edgar.lafuente@cesefor.com

REPóRTER

REFERENCES AND RESOURCES

WEBSITE PRINCIPAL

http://www.cesefor.com

WEBSITE DO PROJETO

--

REFERêNCIA AO PROJETO

--

RECURSOS

--

PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAçãO FOI CRIADA

Rosewood

DATA DE ENTRADA

30 Ago 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