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	POTENCIAL DE MOBILIZAÇÃO
Industria	300,000 m3
TIPO DE MADEIRA	
Tronco	SUSTENTABILIDADE POTENCIAL - VALOR
TIPO DE MADEIRA EM CAUSA	FACILIDADE DE IMPLEMENTAÇÃO
Pinus sylvestris, Pinus nigra, Pinus radiata, Pinus pinaster, Pseudotsuga	Very easy
menziessii, Larix sp, Quercus rubra, Abies alba	
IMPACTE NO AMBIENTE E BIODIVERSIDADE	FACILIDADE DE IMPLEMENTAÇÃO
Positive, it mobilizes wood with a proper forest management	
IMPACTE NAS RECEITAS	PRE-REQUISITOS CHAVE
Positive, more quality timber is mobilized	Experience on manufacturing and classification of structural timber
POTENCIAL DE EXPLORAÇÃO	TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO
HUB	IMPACTE NO EMPREGO
	Positive through better competitiveness
IMPACTE ECONOMICO	CUSTOS DE IMPLEMENTAÇÃO (EURO - EUR)
Structural timber value increases in 10€/m3 approximately	

CONHECIMENTOS ESPECIFICOS NECESSÁRIOS

Knowledge about Phisical-mechanical properties of wood. Harmonized rules

needed

DESAFIO ABORDADO	DOMÍNIO	TIPO DE SOLUÇÃO
	Industrias do sector florestal, bioeconomia circo	ular
	Industria da madeira para construção	
PALAVRAS-CHAVE	SOLUçãO DIGITAL	INOVAçãO
	Não	Não
PAÍS DE ORIGEM	ESCALA DE APLICAçãO	ANO DE INÍCIO E FIM
Espanha	Nacional	2011 -
DADOS DE CONTACTO		
PROPRIETÁRIO OU AUTOR	REPÓRTER	
edgar.lafuente@cesefor.com		
REFERENCES AND RESOURCES		
WEBSITE PRINCIPAL	RECURSOS	
http://www.cesefor.com		
WEBSITE DO PROJETO		
REFERÊNCIA AO PROJETO		

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PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAÇÃO FOI CRIADA

Rosewood

DATA DE ENTRADA

30 Ago 2019







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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY



