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.

DETALLES

ORIGEN DE LA MADERA
Industria

TIPO DE MADERA
Madera en rollo

TIPO DE MADERA AFECTADA
Pinus sylvestris, Pinus nigra, Pinus radiata, Pinus pinaster, Pseudotsuga menziessii, Larix sp, Quercus rubra, Abies alba

IMPACTO EN EL MEDIO AMBIENTE Y LA BIODIVERSIDAD
Positive, it mobilizes wood with a proper forest management

EFECTO SOBRE LOS INGRESOS
Positive, more quality timber is mobilized

POTENCIAL DE EXPLOTACIóN
--

HUB
--

IMPACTO ECONóMICO
Structural timber value increases in 10€/m3 approximately

CONOCIMIENTOS ESPECíFICOS NECESARIOS
Knowledge about Phisical-mechanical properties of wood. Harmonized rules

POTENCIAL DE MOVILIZACIóN
300,000 m3

POTENCIAL DE SOSTENIBILIDAD - VALOR
--

FACILIDAD DE APLICACIóN
Very easy

FACILIDAD DE IMPLEMENTACIóN - EVALUACIóN
--

PREREQUISITOS CLAVE
Experience on manufacturing and classification of structural timber

TIPO DE EVENTO EN EL QUE SE HA PRESENTADO ESTA IFS
--

EFECTO SOBRE EL EMPLEO
Positive through better competitiveness

COSTES DE IMPLEMENTACIóN (EURO - €)
--

needed

MáS DETALLES

RETO ABORDADO

--

DOMINIO

Industrias forestales, economía biocircular

Industria de la construcción con madera

TIPO DE SOLUCIóN

--

PALABRAS CLAVE

--

SOLUCIóN DIGITAL

No

INNOVACIóN

No

PAíS DE ORIGEN

España

ESCALA DE APLICACIóN

Nacional

AñO DE INICIO Y FIN

2011 -

DATOS DE CONTACTO

PROPIETARIO O AUTOR

REPORTADOR

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REFERENCES AND RESOURCES

SITIO WEB PRINCIPAL

http://www.cesefor.com
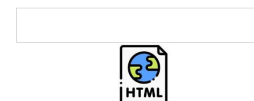
RECURSOS

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SITIO WEB DEL PROYECTO

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REFERENCIA DEL PROYECTO

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PROYECTO BAJO EL QUE SE HA CREADO ESTA FICHA

Rosewood

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