สารบาญ

สารบาญ (ต่อ)

รายการตาราง

รายการตาราง (ต่อ)

รายการภาพประกอบ

ภาพประกอบ		หน้า

รายการภาพประกอบ (ต่อ)

ภาพประกอบ **หน้า**

รายการภาพประกอบ (ต่อ)

รายการภาพประกอบ (ต่อ)

ภาพประกอบ		หน้า

รายการภาพประกอบ (ต่อ)

ภาพประกอบ หน้า

ตัวย่อและสัญลักษณ์

ε_1	Normal strain in 1-direction
ε_2	Normal strain in 2-direction
ε_3	Normal strain in 3-direction
$\{\varepsilon\}_{12}$	Strain vector in plane 12
ε_x	Normal strain in x-direction
ε_y	Normal strain in y-direction
$\{\varepsilon\}_{xy}$	Strain vector in plane xy
ε_x^o	Normal strain of center line datum in x-direction
ε_y^o	Normal strain of center line datum in y-direction
$\{\varepsilon\}^{o}$	Normal strain vector of center line datum
γ_{12}	Shearing strain in plane 12
γ_{13}	Shearing strain in plane 13
γ_{23}	Shearing strain in plane 23
γ_{xy}	Shearing strain in plane xy
γ_{xy}^o	Shearing strain of center line datum in plane xy
κ_x	Curvature of center line datum in x-direction
κ_y	Curvature of center line datum in y-direction
κ_{xy}	Curvature of center line datum in plane xy
$\{\kappa\}$	Curvature vector of center line datum
ν_{12}	Poisson’s ratio for deformation along 2-direction caused by stress along 1-direction
ν_{21}	Poisson’s ratio for deformation along 1-direction caused by stress along 2-direction
θ	Angle θ against 1-direction
σ_1	Normal stress in 1-direction
σ_2	Normal stress in 2-direction
σ_3	Normal stress in 3-direction
σ_4	Shearing stress in plane 13
σ_5	Shearing stress in plane 23
σ_6	Shearing stress in plane 12
$\{\sigma\}_{12}$	Stress vector in plane 12
$\sigma(\theta)$	Strength of wood with angle θ against 1-direction
σ_x	Normal stress in x-direction
σ_y	Normal stress in y-direction
$\{\sigma\}_{xy}$	Stress vector in plane xy
τ_{12}	Shearing stress in plane 12
τ_{13}	Shearing stress in plane 13
τ_{23}	Shearing stress in plane 23
τ_{xy}	Shearing stress in plane xy
ζ	Slenderness ratio

ตัวย่อและสัญลักษณ์ (ต่อ)

$[]_A$	Anti-symmetry Laminate
$[]_S$	Symmetry Laminate
$[]_T$	Non-symmetry Laminate
[A]	Extensional stiffness matrix
[B]	Coupling Stiffness matrix
[D]	Bending stiffness matrix
{M}	Resultant moments vector
{N}	Resultant Forces vector
[Q]	Stiffness matrix
$[\overline{Q}]$	Overall stiffness matrix
$[\overline{Q}]_k$	Overall stiffness matrix of layer k
[T]	Transformation matrix
%MC	Moisture content in percentage
C_1	Compressive strength in 1-direction
C_2	Compressive strength in 2-direction
C_{OSL}	Compressive strength of OSL
C_{SW}	Compressive strength of solid wood
C.V.	Coefficient of variation
d	Strand thickness
DMRT	Duncan ‘s new multiple range test
e	Natural logarithm constant that equals to 2.718282...
E_1	Modulus of elasticity in 1-direction
E_2	Modulus of elasticity in 2-direction
E_1^C	Compressive Modulus of elasticity in 1-direction
E_2^C	Compressive Modulus of elasticity in 2-direction
E_1^T	Tensile Modulus of elasticity in 1-direction
E_2^T	Tensile Modulus of elasticity in 2-direction
G_{12}	Modulus of rigidity or shear modulus in plane 12
LVL	Laminated veneer lumber
l	Strand length
M_x	Moment per length along x-direction
M_y	Moment per length along y-direction
M_{xy}	Moment per length in plane xy
MOR	Modulus of rupture
MOE	Modulus of elasticity
MOE_{OSL}	Modulus of elasticity of OSL
MOE_{SW}	Modulus of elasticity of solid wood
MOR_{OSL}	Modulus of rupture of OSL
MOR_{SW}	Modulus of rupture of solid wood
MSC	Maximum stress criterion
m_1	Weight before drying
m_0	Weight after drying
N	Bending strength at slenderness ratio

ตัวย่อและสัญลักษณ์ (ต่อ)

n	An empirically determined exponent constant
N.A.	Neutral axis
N_x	Force per length along x-direction
N_y	Force per length along y-direction
N_{xy}	Force per length in plane xy
OSB	Oriented strand board
OSL	Oriented strand lumber
P	Bending strength parallel to grain
Pa	Parallel to grain direction
Pe	Perpendicular to grain direction
pMDI	Polymeric Diphenylmethane Diisocyanate
PSL	Parallel strand lumber
Q	Bending Strength perpendicular to grain
Q_{ij}	Member ij in stiffness matrix
$\overline{Q}_{ij}$	Member of overall stiffness matrix
$\overline{Q}_{ijk}$	Member ij of overall stiffness matrix of layer k
S_{12}	Shearing strength in plane 12
$\mathbf{S}_{ij}$	Member ij of compliance matrix
S.D.	Standard deviation
SG	Specific gravity
sC_1	Specific compressive strength along 1-direction
sC_2	Specific compressive strength along 2-direction
sE_1^C	Specific compressive Modulus of elasticity in 1-direction
sE_2^C	Specific compressive Modulus of elasticity in 2-direction
sE_1^T	Specific tensile Modulus of elasticity in 1-direction
sE_2^T	Specific tensile Modulus of elasticity in 2-direction
sMOR	Specific modulus of rupture
sMOE	Specific modulus of elasticity
SSTr	Sum of square of treatment
SSE	Sum of square of error
SST	Sum of square of total
sT_1	Specific tensile strength along 1-direction
sT_2	Specific tensile strength along 2-direction
T_1	Tensile strength in 1-direction
T_2	Tensile strength in 2-direction
THC	Tsai-Hill Criterion
T_{OSL}	Tensile strength of OSL
T_{SW}	Tensile strength of solid wood
Type 0	OSL oriented with $[0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°]_A$
Type I	OSL oriented with $[29°, 25°, 21°, 16°, 9°, 0°,0°, -6°, -8°, -6°, -11°]_A$
Type II	OSL oriented with $[26°, 22°, 18°, 12°, 5°, 0°, 0°, 0°, 0°, 0°]_A$
VDP	Vertical density profile
V	5 cm. of strand length

ตัวย่อและสัญลักษณ์ (ต่อ)

X	10 cm. of strand length
XV	15 cm. of strand length
X_C	Compressive strength in 1-direction
X_T	Tensile strength in 1-direction
Y_C	Compressive strength in 2-direction
Y_T	Tensile strength in 2-direction
z	Distance from center line datum
z_k	Distance of layer k from center line datum