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NOMENCLATURE

a	: radius of the circular membrane
A	: area
b	: radius of the center boss
c_{ij}	: elastic stiffness coefficients
$\mathbf{c}$	: elastic stiffness tensor
D	: flexural rigidity
d	: distance for the over-range protection of a sensor
E	: Young's modulus
h	: thickness of the membrane
l	: length
n	: ratio between the radius of center boss and circular membrane
P	: contact force
q	: intensity load
q_{th}	: threshold pressure
Q	: shear force per unit length
r	: radial distance
R_1, R_2, R_3, R_4	: resistance of the four piezoresistors on a piezoresistive sensor

R_0 : resistance of the piezoresistor without stresses

ΔR_o , ΔR_i : change of the resistance at the outer and inner circumference of the annular membrane

s_{ij} : elatic compliance coefficients

$\mathbf{s}$: elastic compliance tensor

S : sensitivity of the sensor

$w(x)$: distribution function of the deflection

$\boldsymbol{\sigma}$: stress tensor

$\sigma_r(x)$: distribution function of the longitudinal stress

$\sigma_t(x)$: distribution function of the transverse stress

σ_{ys} : yield stress

ν , μ : Poisson's ratio

η : safe factor

ε : strain

$\boldsymbol{\varepsilon}$: strain tensor

π_{ij} : piezoresistance coefficients

$\boldsymbol{\pi}$: piezoresistance tensor

ρ : resistivity