

索引

(按汉语拼音字母顺序)

A

安全因数 safety factor

B

半桥接法 half bridge

闭口薄壁杆 thin-walled tubes

比例极限 proportional limit

边界条件 boundary conditions

变截面梁 beam of variable cross section

变形 deformation

变形协调方程 compatibility equation

标距 gage length

泊松比 Poisson's ratio

补偿块 compensating block

C

材料力学 mechanics of materials

冲击荷载 impact load

初应力, 预应力 initial stress

纯剪切 pure shear

纯弯曲 pure bending

脆性材料 brittle materials

D

大柔度杆 long columns

单位荷载 unit load

单位力偶 unit couple

单位荷载法 unit-load method

单向应力, 单向受力 uniaxial stress

等强度梁 beam of constant strength

低周疲劳 low-cycle fatigue

电桥平衡 bridge balancing

电阻应变计 resistance strain gage

电阻应变仪 resistance strain indicator

叠加法 superposition method

叠加原理 superposition principle

动荷载 dynamic load

断面收缩率 percentage reduction in area

多余约束 redundant restraint

E

二向应力状态 state of biaxial stress

F

分布力 distributed force

复杂应力状态 state of triaxial stress

复合材料 composite material

G

杆, 杆件 bar

刚度 stiffness

刚架, 构架 frame

刚结点 rigid joint

高周疲劳 high-cycle fatigue

各向同性材料 isotropical material

功的互等定理 reciprocal-work theorem

工作应变计 active strain gage

工作应力 working stress

构件 structural member

惯性半径 radius of gyration of an area

惯性积 product of inertia

惯性矩, 截面二次轴距 moment of inertia

广义胡克定律 generalized Hook's law

H

横向变形 lateral deformation

胡克定律 Hook's law

滑移线 slip-lines

J

基本系统 primary system

畸变能理论 distortion energy theory

畸变能密度 distortional strain energy density

极惯性矩, 截面二次极矩 polar moment of inertia

极限应力 ultimate stress

极限荷载 limit load

挤压应力 bearing stress

剪力 shear force

剪力方程 equation of shear force

剪力图 shear force diagram

剪流 shear flow

剪切胡克定律 Hook's law for shear

剪切 shear

交变应力, 循环应力 cyclic stress
截面法 method of sections
截面几何性质 geometrical properties of an area
截面核心 core of section
静不定次, 超静定次数 degree of a statically indeterminate problem
静不定问题, 超静定问题 statically indeterminate problem
静定问题 statically determinate problem
静荷载 static load
静矩, 一次矩 static moment
颈缩 necking

K

开口薄壁杆 bar of thin-walled open cross section
抗拉强度 ultimate stress in tension
抗扭截面系数 section modulus in torsion
抗扭强度 ultimate stress in torsion
抗弯截面系数 section modulus in bending

L

拉压刚度 axial rigidity
拉压杆, 轴向承载杆 axially loaded bar
理想弹塑性假设 elastic-perfectly plastic assumption
力法 force method
力学性能 mechanical properties
连续梁 continuous beam
连续条件 continuity condition
梁 beams
临界应力 critical stress
临界荷载 critical load

M

迈因纳定律 Miner's law
名义屈服强度 offset yielding stress
莫尔强度理论 Mohr theory of failure
敏感栅 sensitive grid

N

挠度 deflection
挠曲轴 deflection curve
挠曲轴方程 equation of deflection curve
挠曲轴近似微分方程 approximately differential equation of the deflection curve
内力 internal forces
扭力矩 twisting moment
扭矩 torsional moment

扭矩图 torque diagram
扭转 torsion
扭转极限应力 ultimate stress in torsion
扭转角 angel of twist
扭转屈服强度 yielding stress in torsion
扭转刚度 torsional rigidity

O

欧拉公式 Euler's formula

P

疲劳极限, 条件疲劳极限 endurance limit
疲劳破坏 fatigue rupture
疲劳寿命 fatigue life
偏心拉伸 eccentric tension
偏心压缩 eccentric compression
平均应力 average stress
平面弯曲 plane bending
平面应力状态 state of plane stress
平行移轴定理 parallel axis theorem
平面假设 plane cross-section assumption

Q

强度 strength
强度理论 theory of strength
强度条件 strength condition
切变模量 shear modulus
切应变 shear strain
切应力 shear stress
切应力互等定理 theorem of conjugate shearing stress
屈服 yield
屈服强度 yield strength
全桥接线法 full bridge

R

热应力 thermal stress

S

三向应力状态 state of triaxial stress
三轴直角应变花 three-element rectangular rosette
三轴等角应变花 three-element delta rosette
失稳 buckling
伸长率 elongation

圣维南原理 Saint-Venant's principle
实验应力分析 experimental stress analysis
塑性变形, 残余变形 plastic deformation
塑性材料, 延性材料 ductile materials
塑性铰 plastic hinge

T

弹簧常量 spring constant
弹性变形 elastic deformation
弹性模量 modulus of elasticity
体积力 body force
体积改变能密度 density of energy of volume change
体应变 volume strain

W

弯矩 bending moment
弯矩方程 equation of bending moment
弯矩图 bending moment diagram
弯曲 bending
弯曲刚度 flexural rigidity
弯曲正应力 normal stress in bending
弯曲切应力 shear stress in bending
弯曲中心 shear center
位移法 displacement method
位移互等定理 reciprocal-displacement theorem
稳定条件 stability condition
稳定性 stability
稳定安全因数 safety factor for stability

X

细长比, 柔度 slenderness ratio
线性弹性体 linear elastic body
约束扭转 constraint torsion
相当长度, 有效长度 equivalent length
相当应力 equivalent stress
小柔度杆 short columns
形心轴 centroidal axis
形状系数 shape factor
许用应力 allowable stress
许用应力法 allowable stress method
许用荷载 allowable load
许用荷载法 allowable load method

Y

应变花 strain rosette
应变计 strain gage
应变能 strain energy
应变能密度 strain energy density
应力 stress
应力速率 stress ratio
应力比 stress ratio
应力幅 stress amplitude
应力状态 state of stress
应力集中 stress concentration
应力集中因数 stress concentration factor
应力—寿命曲线, S-N 曲线 stress-cycle curve
应力—应变图 stress-strain diagram
应力圆, 莫尔圆 Mohr's circle for stresses

Z

正应变 normal strain
正应力 normal stress
中面 middle plane
中柔度杆 intermediate columns
中性层 neutral surface
中性轴 neutral axis
轴 shaft
轴力 axial force
轴力图 axial force diagram
轴向变形 axial deformation
轴向拉伸 axial tension
轴向压缩 axial compression
主平面 principal planes
主应力 principal stress
主应力迹线 principal stress trajectory
主轴 principal axis
主惯性矩 principal moment of inertia
主形心惯性矩 principal centroidal moments of inertia
主形心轴 principal centroidal axis
转角 angel of rotation
转轴公式 transformation equation
自由扭转 free torsion
组合变形 combined deformation
组合截面 composite area
最大切应力理论 maximum shear stress theory
最大拉应变理论 maximum tensile strain theory

最大拉应力理论 maximum tensile stress theory

最大应力 maximum stress

最小应力 minimum stress