

一. 综合类

1.geotechnical engineering 岩土工程

2.foundation engineering 基础工程

3.soil, earth 土

4.soil mechanics 土力学

cyclic loading 周期荷载

unloading 卸载

reloading 再加载

viscoelastic foundation 粘弹性地基

viscous damping 粘滞阻尼

shear modulus 剪切模量

5.soil dynamics 土动力学

6.stress path 应力路径

7.numerical geotechnical 数值岩土力学

二. 土的分类

1.residual soil 残积土 groundwater level 地下水位

2.groundwater 地下水

groundwater table 地下水位

3.clay minerals 粘土矿物

4.secondary minerals 次生矿物

5.landslides 滑坡

6.bore hole columnar section 钻孔柱状图

7.engineering geologic investigation 工程地质勘察

8.boulder 漂石

9.cobble 卵石

10.gravel 砂石

11.gravelly sand 砾砂

12.coarse sand 粗砂

13.medium sand 中砂

14.fine sand 细砂

15.silty sand 粉土

16.clayey soil 粘性土

17.clay 粘土

18.silty clay 粉质粘土

19.silt 粉土

20.sandy silt 砂质粉土

21.clayey silt 粘质粉土

22.saturated soil 饱和土

23.unsaturated soil 非饱和土

24.fill (soil) 填土

25.overconsolidated soil 超固结土

26.normally consolidated soil 正常固结土

27.underconsolidated soil 欠固结土

28.zonal soil 区域性土

29.soft clay 软粘土

30.expansive (swelling) soil 膨胀土

31.peat 泥炭

32.loess 黄土

33.frozen soil 冻土

三. 土的基本物理力学性质

1.cc compression index

2.cu undrained shear strength

3.cu/p₀ ratio of undrained strength cu to effective overburden stress p₀

(cu/p₀)_{NC} ,(cu/p₀)_{oc} subscripts NC and OC designated normally consolidate
d and overconsolidated, respectively

4.cvane cohesive strength from vane test

5.e₀ natural void ratio

6.I_p plasticity index

7.K₀ coefficient of “at-rest” pressure ,for total stresses σ_1 and σ_2

8.K₀' domain for effective stresses σ_1' and σ_2'

9.K_{0n} K₀ for normally consolidated state

10.K_{0u} K₀ coefficient under rapid continuous loading ,simulating instantaneous loading or an undrained condition

11.K_{0d} K₀ coefficient under cyclic loading(frequency less than 1Hz),as a pseudo- dynamic test for K₀ coefficient

12.k_h ,k_v permeability in horizontal and vertical directions, respectively

13. N blow count, standard penetration test

14. OCR over-consolidation ratio

15. p_c preconsolidation pressure, from oedometer test

16. p_0 effective overburden pressure

17. p_s specific cone penetration resistance, from static cone test

18. q_u unconfined compressive strength

19. U , U_m degree of consolidation, subscript m denotes mean value of a specimen

20. u , u_b , u_m pore (water) pressure, subscripts b and m denote bottom of specimen and mean value, respectively

21. w_0 w_L w_p natural water content, liquid and plastic limits, respectively

22. σ_1 , σ_2 principal stresses, σ_1' and σ_2' denote effective principal stresses

23. Atterberg limits 阿太堡界限

24. degree of saturation 饱和度

25. dry unit weight 干重度

26. moist unit weight 湿重度

27. saturated unit weight 饱和重度

28. effective unit weight 有效重度

29. density 密度

30. compactness 密实度

31. maximum dry density 最大干密度

32. optimum water content 最优含水量

33.three phase diagram 三相图

34.tri-phase soil 三相土

35.soil fraction 粒组

36.sieve analysis 筛分

37.hydrometer analysis 比重计分析

38.uniformity coefficient 不均匀系数

39.coefficient of gradation 级配系数

40.fine-grained soil(silty and clayey)细粒土

41.coarse- grained soil(gravelly and sandy)粗粒土

42.Unified soil classification system 土的统一分类系统

43.ASCE=American Society of Civil Engineer 美国土木工程师学会

44.AASHTO= American Association State Highway Officials 美国州公路官员协会

45.ISSMGE=International Society for Soil Mechanics and Geotechnical Engineering

国际土力学与岩土工程学会

四. 渗透性和渗流

1.Darcy's law 达西定律

2.piping 管涌

3.flowing soil 流土

4.sand boiling 砂沸

5.flow net 流网

6.seepage 渗透（流）

7.leakage 渗流

8.seepage pressure 渗透压力

9.permeability 渗透性

10.seepage force 渗透力

11.hydraulic gradient 水力梯度

12.coefficient of permeability 渗透系数

五. 地基应力和变形

1.soft soil 软土

2.(negative) skin friction of driven pile 打入桩（负）摩阻力

3.effective stress 有效应力

4.total stress 总应力

5.field vane shear strength 十字板抗剪强度

6.low activity 低活性

7.sensitivity 灵敏度

8.triaxial test 三轴试验

9.foundation design 基础设计

10.recompaction 再压缩

11.bearing capacity 承载力

12.soil mass 土体

13.contact stress (pressure) 接触应力（压力）

14.concentrated load 集中荷载

15.a semi-infinite elastic solid 半无限弹性体

16.homogeneous 均质

17.isotropic 各向同性

18.strip footing 条基

19.square spread footing 方形独立基础

20.underlying soil (stratum ,strata)下卧层 (土)

21.dead load =sustained load 恒载 持续荷载

22.live load 活载

23.short -term transient load 短期瞬时荷载

24.long-term transient load 长期荷载

25.reduced load 折算荷载

26.settlement 沉降

27.deformation 变形

28.casing 套管

29.dike=dyke 堤 (防)

30.clay fraction 粘粒粒组

31.physical properties 物理性质

32.subgrade 路基

33.well-graded soil 级配良好土

34.poorly-graded soil 级配不良土

35.normal stresses 正应力

36.shear stresses 剪应力

37.principal plane 主平面

38.major (intermediate, minor) principal stress 最大（中、最小）主应力

39.Mohr-Coulomb failure condition 摩尔-库仑破坏条件

40.FEM=finite element method 有限元法

41.limit equilibrium method 极限平衡法

42.pore water pressure 孔隙水压力

43.preconsolidation pressure 先期固结压力

44.modulus of compressibility 压缩模量

45.coefficient of compressibility 压缩系数

46.compression index 压缩指数

47.swelling index 回弹指数

48.geostatic stress 自重应力

49.additional stress 附加应力

50.total stress 总应力

51.final settlement 最终沉降

52.slip line 滑动线

六 基坑开挖与降水

1 excavation 开挖（挖方）

2 dewatering（基坑）降水

3 failure of foundation 基坑失稳

4 bracing of foundation pit 基坑围护

5 bottom heave=basal heave（基坑）底隆起

6 retaining wall 挡土墙

7 pore-pressure distribution 孔压分布

8 dewatering method 降低地下水位法

9 well point system 井点系统（轻型）

10 deep well point 深井点

11 vacuum well point 真空井点

12 braced cuts 支撑围护

13 braced excavation 支撑开挖

14 braced sheeting 支撑挡板

七. 深基础--deep foundation

1.pile foundation 桩基础

1)cast -in-place 灌注桩

diving casting cast-in-place pile 沉管灌注桩

bored pile 钻孔桩

special-shaped cast-in-place pile 机控异型灌注桩

piles set into rock 嵌岩灌注桩

rammed bulb pile 夯扩桩

2)belled pier foundation 钻孔墩基础

drilled-pier foundation 钻孔扩底墩

under-reamed bored pier

3)precast concrete pile 预制混凝土桩

4)steel pile 钢桩

steel pipe pile 钢管桩

steel sheet pile 钢板桩

5) prestressed concrete pile 预应力混凝土桩

prestressed concrete pipe pile 预应力混凝土管桩

2. caisson foundation 沉井（箱）

3. diaphragm wall 地下连续墙 截水墙

4. friction pile 摩擦桩

5. end-bearing pile 端承桩

6. shaft 竖井；桩身

7. wave equation analysis 波动方程分析

8. pile caps 承台（桩帽）

9. bearing capacity of single pile 单桩承载力

10. lateral pile load test 单桩横向载荷试验

11. ultimate lateral resistance of single pile 单桩横向极限承载力

12. static load test of pile 单桩竖向静荷载试验

13. vertical allowable load capacity 单桩竖向容许承载力

14. low pile cap 低桩承台

15. high-rise pile cap 高桩承台

16. vertical ultimate uplift resistance of single pile 单桩抗拔极限承载力

17. silent piling 静力压桩

18. uplift pile 抗拔桩

19. anti-slide pile 抗滑桩

20.pile groups 群桩

21.efficiency factor of pile groups 群桩效率系数 (η)

22.efficiency of pile groups 群桩效应

23.dynamic pile testing 桩基动测技术

24.final set 最后贯入度

25.dynamic load test of pile 桩动荷载试验

26.pile integrity test 桩的完整性试验

27.pile head=butt 桩头

28.pile tip=pile point=pile toe 桩端 (头)

29.pile spacing 桩距

30.pile plan 桩位布置图

31.arrangement of piles =pile layout 桩的布置

32.group action 群桩作用

33.end bearing=tip resistance 桩端阻

34.skin(side) friction=shaft resistance 桩侧阻

35.pile cushion 桩垫

36.pile driving(by vibration) (振动) 打桩

37.pile pulling test 拔桩试验

38.pile shoe 桩靴

39.pile noise 打桩噪音

40.pile rig 打桩机

八. 地基处理--ground treatment

1.technical code for ground treatment of building 建筑地基处理技术规范

2.cushion 垫层法

3.preloading 预压法

4.dynamic compaction 强夯法

5.dynamic compaction replacement 强夯置换法

6.vibroflotation method 振冲法

7.sand-gravel pile 砂石桩

8.gravel pile(stone column)碎石桩

9.cement-flyash-gravel pile(CFG)水泥粉煤灰碎石桩

10.cement mixing method 水泥土搅拌桩

11.cement column 水泥桩

12.lime pile (lime column)石灰桩

13.jet grouting 高压喷射注浆法

14.rammed-cement-soil pile 夯实水泥土桩法

15.lime-soil compaction pile 灰土挤密桩

lime-soil compacted column 灰土挤密桩

lime soil pile 灰土挤密桩

16.chemical stabilization 化学加固法

17.surface compaction 表层压实法

18.surcharge preloading 超载预压法

19.vacuum preloading 真空预压法

20.sand wick 袋装砂井

21.geofabric ,geotextile 土工织物

22.composite foundation 复合地基

23.reinforcement method 加筋法

24.dewatering method 降低地下水固结法

25.freezing and heating 冷热处理法

26.expansive ground treatment 膨胀土地基处理

27.ground treatment in mountain area 山区地基处理

28.collapsible loess treatment 湿陷性黄土地基处理

29.artificial foundation 人工地基

30.natural foundation 天然地基

31.pillow 褥垫

32.soft clay ground 软土地基

33.sand drain 砂井

34.root pile 树根桩

35.plastic drain 塑料排水带

36.replace ment ratio (复合地基) 置换率

九. 固结 consolidation

1.Terzzaghi's consolidation theory 太沙基固结理论

2.Barraon's consolidation theory 巴隆固结理论

3.Biot's consolidation theory 比奥固结理论

4.over consolidation ration (OCR)超固结比

- 5.overconsolidation soil 超固结土
- 6.excess pore water pressure 超孔压力
- 7.multi-dimensional consolidation 多维固结
- 8.one-dimensional consolidation 一维固结
- 9.primary consolidation 主固结
- 10.secondary consolidation 次固结
- 11.degree of consolidation 固结度
- 12.consolidation test 固结试验
- 13.consolidation curve 固结曲线
- 14.time factor T_v 时间因子
- 15.coefficient of consolidation 固结系数
- 16.preconsolidation pressure 前期固结压力
- 17.principle of effective stress 有效应力原理
- 18.consolidation under K_0 condition K_0 固结

十. 抗剪强度 shear strength

- 1.undrained shear strength 不排水抗剪强度
- 2.residual strength 残余强度
- 3.long-term strength 长期强度
- 4.peak strength 峰值强度
- 5.shear strain rate 剪切应变速率
- 6.dilatation 剪胀
- 7.effective stress approach of shear strength 剪胀抗剪强度有效应力法

8.total stress approach of shear strength 抗剪强度总应力法

9.Mohr-Coulomb theory 莫尔-库仑理论

10.angle of internal friction 内摩擦角

11.cohesion 粘聚力

12.failure criterion 破坏准则

13.vane strength 十字板抗剪强度

14.unconfined compression 无侧限抗压强度

15.effective stress failure envelop 有效应力破坏包线

16.effective stress strength parameter 有效应力强度参数

十一. 本构模型--constitutive model

1.elastic model 弹性模型

2.nonlinear elastic model 非线性弹性模型

3.elastoplastic model 弹塑性模型

4.viscoelastic model 粘弹性模型

5.boundary surface model 边界面模型

6.Duncan-Chang model 邓肯-张模型

7.rigid plastic model 刚塑性模型

8.cap model 盖帽模型

9.work softening 加工软化

10.work hardening 加工硬化

11.Cambridge model 剑桥模型

12.ideal elastoplastic model 理想弹塑性模型

13.Mohr-Coulomb yield criterion 莫尔-库仑屈服准则

14.yield surface 屈服面

15.elastic half-space foundation model 弹性半空间地基模型

16.elastic modulus 弹性模量

17.Winkler foundation model 文克尔地基模型

十二. 地基承载力--bearing capacity of foundation soil

1.punching shear failure 冲剪破坏

2.general shear failure 整体剪切破坏

3.local shear failure 局部剪切破坏

4.state of limit equilibrium 极限平衡状态

5.critical edge pressure 临塑荷载

6.stability of foundation soil 地基稳定性

7.ultimate bearing capacity of foundation soil 地基极限承载力

8.allowable bearing capacity of foundation soil 地基容许承载力

十三. 土压力--earth pressure

1.active earth pressure 主动土压力

2.passive earth pressure 被动土压力

3.earth pressure at rest 静止土压力

4.Coulomb's earth pressure theory 库仑土压力理论

5.Rankine's earth pressure theory 朗金土压力理论

十四. 土坡稳定分析--slope stability analysis

- 1.angle of repose 休止角
- 2.Bishop method 毕肖普法
- 3.safety factor of slope 边坡稳定安全系数
- 4.Fellenius method of slices 费纽伦斯条分法
- 5.Swedish circle method 瑞典圆弧滑动法
- 6.slices method 条分法

十五. 挡土墙--retaining wall

- 1.stability of retaining wall 挡土墙稳定性
- 2.foundation wall 基础墙
- 3.counter retaining wall 扶壁式挡土墙
- 4.cantilever retaining wall 悬臂式挡土墙
- 5.cantilever sheet pile wall 悬臂式板桩墙
- 6.gravity retaining wall 重力式挡土墙
- 7.anchored plate retaining wall 锚定板挡土墙
- 8.anchored sheet pile wall 锚定板板桩墙

十六. 板桩结构物--sheet pile structure

- 1.steel sheet pile 钢板桩
- 2.reinforced concrete sheet pile 钢筋混凝土板桩
- 3.steel piles 钢桩

4.wooden sheet pile 木板桩

5.timber piles 木桩

十七. 浅基础--shallow foundation

1.box foundation 箱型基础

2.mat(raft) foundation 片筏基础

3.strip foundation 条形基础

4.spread footing 扩展基础

5.compensated foundation 补偿性基础

6.bearing stratum 持力层

7.rigid foundation 刚性基础

8.flexible foundation 柔性基础

9.embedded depth of foundation 基础埋置深度

10.net foundation pressure 基底附加应力

11.structure-foundation-soil interaction analysis 上部结构—基础—地基共同作用分析

十八. 土的动力性质--dynamic properties of soils

1.dynamic strength of soils 动强度

2.wave velocity method 波速法

3.material damping 材料阻尼

4.geometric damping 几何阻尼

5.damping ratio 阻尼比

- 6.initial liquefaction 初始液化
- 7.natural period of soil site 地基固有周期
- 8.dynamic shear modulus of soils 动剪切模量
- 9.dynamic magnification factor 动力放大因素
- 10.liquefaction strength 抗液化强度
- 11.dimensionless frequency 无量纲频率
- 12.evaluation of liquefaction 液化势评价
- 13.stress wave in soils 土中应力波
- 14.dynamic settlement 振陷（动沉降）

十九. 动力机器基础

- 1.equivalent lumped parameter method 等效集总参数法
- 2.dynamic subgrade reaction method 动基床反力法
- 3.vibration isolation 隔振
- 4.foundation vibration 基础振动
- 5.elastic half space theory of foundation vibration 基础振动弹性半空间理论
- 6.allowable amplitude of foundation 基础振动容许振幅
- 7.natural frequency of foundation 基础自振频率

二十. 地基基础抗震

- 1.earthquake engineering 地震工程
- 2.soil dynamics 土动力学
- 3.duration of earthquake 地震持续时间

- 4.earthquake response spectrum 地震反应谱
- 5.earthquake intensity 地震烈度
- 6.earthquake magnitude 震级
- 7.seismic predominant period 地震卓越周期
- 8.maximum acceleration of earthquake 地震最大加速度

二十一. 室内土工实验

- 1.high pressure consolidation test 高压固结试验
- 2.consolidation under K_0 condition K_0 固结试验
- 3.falling head permeability 变水头试验
- 4.constant head permeability 常水头渗透试验
- 5.unconsolidated-undrained triaxial test 不固结不排水试验(UU)
- 6.consolidated undrained triaxial test 固结不排水试验(CU)
- 7.consolidated drained triaxial test 固结排水试验(CD)
- 8.compaction test 击实试验
- 9.consolidated quick direct shear test 固结快剪试验
- 10.quick direct shear test 快剪试验
- 11.consolidated drained direct shear test 慢剪试验
- 12.sieve analysis 筛分析
- 13.geotechnical model test 土工模型试验
- 14.centrifugal model test 离心模型试验
- 15.direct shear apparatus 直剪仪
- 16.direct shear test 直剪试验

17.direct simple shear test 直接单剪试验

18.dynamic triaxial test 三轴试验

19.dynamic simple shear 动单剪

20.free (resonance) vibration column test 自(共)振柱试验

二十二. 原位测试

1.standard penetration test (SPT)标准贯入试验

2.surface wave test (SWT)表面波试验

3.dynamic penetration test(DPT)动力触探试验

4.static cone penetration (SPT) 静力触探试验

5.plate loading test 静力荷载试验

6.lateral load test of pile 单桩横向荷载试验

7.static load test of pile 单桩竖向荷载试验

8.cross-hole test 跨孔试验

9.screw plate test 螺旋板荷载试验

10.pressuremeter test 旁压试验

11.light sounding 轻便触探试验

12.deep settlement measurement 深层沉降观测

13.vane shear test 十字板剪切试验

14.field permeability test 现场渗透试验

15.in-situ pore water pressure measurement 原位孔隙水压量测

16.in-situ soil test 原位试验