



参考答案

Unit 1

Part I Illustrated Words and Expressions



EXERCISE 1

- | | | |
|---------------------------|--------------------------|-------------------------|
| 1. Landscape architecture | 2. Interior architecture | 3. Multi-storey block |
| 4. Structure | 5. Plan | 6. Finished building |
| 7. Longitudinal section | 8. Cross section | 9. Sketch 10. Layout |

Part II Reading and Translating

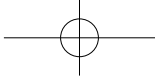


Passage A



EXERCISE 2

1. A design process is a series of analytical and creative thinking steps. It is a framework of steps, incorporating both rational and intuitive phases to produce the best design solution possible.
2. 1) Client Contract
2) Research and Analysis (including site visit)
3) Design
4) Implementation
5) Maintenance
6) Post-construction Evaluation
3. No. In reality, many of the steps overlap one another and blend together so the neat ordering of the outline is less clear or apparent. Some of the steps may parallel one another and occur simultaneously.
4. It requires a great deal of sensitive observation, analysis, studying/thinking and restudying as well as some degree of inspiration and creativity.
5. Rationally, it involves inventory, analysis, program document and construction knowledge. Intuitively, it refers to the feel of putting forms and shapes together, and aesthetic appreciation, etc.



English for Civil Engineering



EXERCISE 3

1. problem solving
2. architects
3. industrial designers
4. engineers
5. client contract
6. sensitive observation
7. analysis
8. studying/thinking
9. restudying
10. inspiration and creativity
11. rational
12. intuitive
13. the best design solution



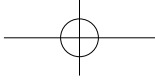
EXERCISE 4

English	Chinese
	定性分析
quantitative analysis	
	骨架
a metal framework	
	在金属上镌刻图案
design a monument	
	服装设计
	房屋维修
file maintenance	
	设备的保养
maintenance of roads	
	一个更为相似的事例
a remarkable parallel	
	与河流平行
navigate parallel with the coast	
	厂址
a construction/building site	
	选址
purchase a site	
	概略原理图 / 解说图
legible diagram	
	发动机简图
draw a diagram	



EXERCISE 5

1. 一项好的设计方案应该恰到好处地满足一切必需的要求，达到既经济又给人以美感的效果。
2. 设计过程作为向客户阐明并维护其设计方案的依据。



- 设计阶段开始之后，可能有必要重新踏勘场地或再次与客户洽谈。
- 设计新手必须懂得，完美而实用的设计方案不会像变魔术一样从天上掉下来。
- 实用而给人以激情的设计要求做大量敏锐的观察、分析、研究，外加一定的灵感和创造性。
- 应该注意，提出一个设计方案确实包括理性和直觉两个方面。

Passage B**EXERCISE 6**

The London Millennium Tower is 410 m (plus its 35.9 m mast) high, and its famous free form plan is a continuous series of curves in different kinds of glass. The top of the building is bifurcated, dividing into two elegant tail fins of different heights, which include top quality residential units. Apart from apartments, the tower provides space for offices, shops, restaurants, gardens, etc. in the sky. There is a public viewing gallery with breathtaking panoramic view of London in the large glass atrium at exactly 312.5 m above ground level.

Part III Simulated Writing**EXERCISE 7**

Medallion's Cabinetry

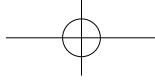
1. three 2. quality 3. Designer 11 4. superior 5. grand 6. custom 7. 41 8. 11 9. 72%

Schrock Cabinets

1. three 2. styles 3. production line 4. selection 5. look 6. durability 7. 100

**EXERCISE 8**

English	Chinese
	属于不同的类型；
	归于这一类
	适合呆在这个组织
	衣服适合
fit into any budget	
	按商定的价格
at an affordable/a reasonable price	
	从这些样品中进行选择
choose from these books	
	漆得光洁精美的木器



English for Civil Engineering

续表

English	Chinese
a table with a beautiful finish	
	本周特别推出卧室家具
feature kitchen cabinets this week	
	很多粗布牛仔裤可供选择
a fine selection of cheeses	
	各种各样的摄影用品
	廉价的袜子
promote the new line	



EXERCISE 9

1. b 2. a 3. c 4. d 5. g 6. e 7. f 8. h 9. i 10. k 11. j



EXERCISE 10

1. b 2. c 3. a 4. d 5. e 6. f 7. g

Part IV Listening and Speaking



EXERCISE 11

A: If I'm not mistaken, you must be Mr Joey Stern.

B: Yes I'm Joey Stern.

A: Glad to meet you. I'm Wang Ling from Jinlong Construction Company.

B: Oh, nice to meet you, Mr Wang.

A: Mr Stern, Let me introduce Mr. Li This is Mr. Li Hua, our assistant manager.

B: How do you do Mr. Li?

C: How do you do, Mr. Stern?

B: Thank you for coming to meet me.

A: It's our pleasure May I help you With your Iuggage?

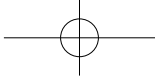
B: I think I can manage. Thank you all the Same.

A: Then let's go now. The Car is waiting for us outside.



EXERCISE 12

Because it means freedom for them.

**EXERCISE 13**

1. T 2. F 3. T 4. F

**EXERCISE 14**

1. Hold the line, please. He'll be with you in a minute.
2. Excuse me, are you Mr. Mark Stern?
3. I'll be on board Flight 2516, which is due in Chongqing at 7:00.
4. It's my pleasure.

**EXERCISE 15**

1. e 2. f 3. b 4. c 5. a 6. d

**EXERCISE 16**

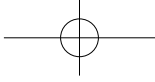
1. May I speak to Mr. Zhang, please?
2. Which flight are you taking?
3. We plan to hold a meeting to discuss the project today.
4. Did you have a nice flight?
5. Let me help you with your luggage.
6. What is the convenient time for you?
7. I'm Zhang Jun from Shanghai No.3 Construction Engineering Company.

Tapescript**Dialogue**

- A: If I'm not mistaken, you must be Mr. Joey Stern.
B: Yes, I'm Joey Stern.
A: Glad to meet you, I'm Wang Ling from Jinlong Construction Company.
B: Oh, nice to meet you, Mr. Wang.
A: Mr. Stern, let me introduce Mr. Li. This is Mr. Li Hua, our assistant manager.
B: How do you do, Mr. Li.
C: How do you do, Mr. Stern.
B: Thank you for coming to meet me.
A: It's our pleasure. May I help you with your luggage?
B: I think I can manage. Thank you all the same.
A: Then let's go now. The car is waiting for us outside.

Passage

For American teenagers living in the country or in the suburbs, getting a driver's license is one of the most important events in their lives. A driver's license means freedom! Freedom from



English for Civil Engineering

having to ask parents to go where they want to go .as long as they can get a car and their parents' permission Each state of the union has a different set of rules for getting a driver's license The minimum age can be as low as 15 in rural states, but more generally it is 16 or 17 Sometimes, as in California, to get a driver's license between the ages of 16 and 18, one must take a Driver's Education course.

Unit 2

Part I Illustrated Words and Expressions



EXERCISE 1

- | | | | | |
|-----------|------------|-----------------|---------------|----------------------------|
| 1. Tread | 2. Railing | 3. Stairs | 4. Handrail | 5. Riser |
| 6. Nosing | 7. Landing | 8. Landing Slab | 9. Waist Slab | 10. Non slip Tread Inserts |

Part II Reading and Translating



Passage A



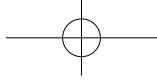
EXERCISE 2

1. It is to carry the load of a structure and spread it over a greater area, evenly and without undue settlement.
2. Yes, but not always As the nature of the soil often varies considerably. On the same construction site, and the capacity of the soil to support loads also varies.
3. Before the foundation is laid, soft spots are usually filled with consolidated hardcore or a weak concrete.
4. It normally consists of plain or reinforced concrete.
5. It should be laid sufficiently below the ground frost level.
6. They are normally supported on square concrete foundation bases.
7. Where the load to be carried is high and the bearing capacity of the soil is poor.
8. When a foundation is laid in poor soil.



EXERCISE 3

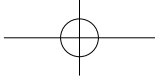
1. to carry the load of a structure
2. a greater area
3. plain



4. reinforced
5. sufficiently below the ground frost level
6. frozen soil lifting it
7. a uniform size
8. the different nature of the soil
9. heavy reinforcement for concrete foundation
10. a raft foundation
11. If a foundation is laid in poor soil,
12. 4 greater depth

**EXERCISE 4**

English	Chinese
	活负载 / 荷载
the dead/static load	
	最大负载
the safe load	
	用泥土把墙加厚
reinforce one's argument with fresh points	
	加强排
reinforced concrete	
	低标号混凝土
quality concrete	
	素混凝土
	构成…的基础
lay the foundation of the new hospital	
	打桩来加固基础
pour a solid foundation of cement	
	混凝土地基板
a cement slab	
	大理石板
a stone slab	
storage capacity	
	自我表达能力
capacity for organization	
	20 加仑的容量
a capacity of 20 horse-power	
	肥沃的土壤



续表

English	Chinese
barren soil	
	软土
a porous soil	
	本国, 家乡
a friendly soil	
	寒暑表的水银柱
a column of smoke	
	金融栏
advertisement/advertising columns	
	海空军基地
a fleet operating base	
	一个宽大的钢座
a circular base	
	基线 / 底线
base level	
	桥墩
landing pier	
	终端 (电) 杆
an isolated pier	



EXERCISE 5

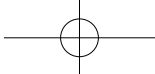
1. 基础的作用是承受结构的荷载, 并将其均匀地向更大更深的范围传递, 避免不均匀的沉降。
2. 土体的承载力即是单位面积上地基所能安全承受的最大荷载。
3. 由于地基的性质有很大的差异, 土体的承载力也不相同。
4. 即使地基能承受相同的荷载, 要为整个结构设计出相同尺寸的基础并不总是可能的。
5. 在浇注地基前, 通常用碎石垫层加固或用强度低的混凝土填充土质松软的地方。
6. 在这些独立柱间隔密集的地方, 柱下设置条形基础更可取, 以承受整排柱子传下来的荷载, 就像承重墙下的条形基础一样。

Passage B



EXERCISE 6

District heating always seemed part of the establishment in Germany Trends in district heating design are favorable to the all plastic solution, particularly in sizes up to 100 mm, e.g Flow temperatures are being reduced and decentralized CHP systems are becoming more common Also, all the plastic solution meets the demand for network cost saving, since it offers continuous runs up



to 200 m without joints and does not need expansion devices.

Part III Simulated Writing



EXERCISE 7

A. Blinds at Lowe's

1. child-proof break-through 2. true light-blocking 3. warp 4. fade
5. non-leaded 6. deluxe 7. hidden 8. white 9. alabaster

B. Saltillo Tiles

1. rustic 2. handcrafted 3. indoors 4. outdoors 5. smooth 6. 8" 7. 4" 8. character

C. Windows at Lowe's

1. easy 2. insulated 3. preservative-treated 4. energy-saving



EXERCISE 8

English	Chinese
定做的衣服	
	custom-made/built furniture
易于安装	
	easy to clean
不含铅的烤漆	
	non-leaded gasoline
中号有货	
	available in the king size
经防腐处理的窗框	
	preservative-treated floorboard
节能窗	
	energy-saving shutters/blinds



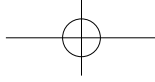
EXERCISE 9

1. b 2. a 3. c 4. d 5. e 6. h 7. f 8. g



EXERCISE 10

1. available, for low moisture, conceals headrail, for easy installation, 5-year warranty
2. Choose from, with European look/style, a natural stone appearance, Use in



English for Civil Engineering

Part IV Listening and Speaking



EXERCISE 11

- A: What's your plan for this evening?
B: I've already finished my report, so I will be free this evening.
A: That's good. We'll hold a dinner in your honor at Dahua Restaurant.
B: That's very kind of you.
A: Mr. Zhang, our manager, will be present at the dinner, and some department managers will be there too.
B: I'll be delighted to meet them.
A: The dinner will begin at 6:30. We'll come for you at 6:00. Is that convenient for you?
B: Yes, for me, any time will do.
A: So we'll meet you at 6:00.
B: Yes, I'll be waiting for you in the lobby of the hotel.



EXERCISE 12

Three.



EXERCISE 13

1. T 2. F 3. T 4. T



EXERCISE 14

1. We'd like to have your views on the project.
2. Let's first discuss the feasibility of the project if you don't mind.
3. When we talk about the location, the problem of transportation should be taken into consideration.



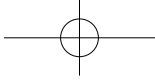
EXERCISE 15

1. d 2. c 3. a 4. b 5. f 6. g 7. h 8. e



EXERCISE 16

1. We plan to establish a supermarket.
2. What is your designing requirement?
3. There are detailed descriptions about it in this document.



4. The location of the project is very important.
5. This building is of reinforced-concrete structure.
6. We'll study your documents before we begin the designing.

Tapescript

Dialogue

- A: What's your plan for this evening?
B: I've already finished my report, so I will be free this evening.
A: That's good. We'll hold a dinner in your honor at Dahua Restaurant.
B: That's very kind of you.
A: Mr. Zhang, our manager, will be present at the dinner, and some department managers will be there too.
B: I'll be delighted to meet them.
A: The dinner will begin at 6:30. We'll come for you at 6:00. Is that convenient for you?
B: Yes. For me, any time will do.
A: So we'll meet at 6:00.
B: Yes, I'll be waiting for you in the lobby of the hotel.

Passage

Should a person own a car? This is an important question. In a large urban area, there are some good reasons for owning a car. First, a car allows a person to move around freely. With a car, there is no need to check a bus schedule or wait for a train. Second, a car is a comfortable way to travel, especially in the wintertime. In bad weather, the driver stays warm and dry, while the poor bus or train riders have to stand in the rain. Finally, a driver is usually safe in a car at night. The rider might need to walk down a dark street to get to a stop, or wait on a dark corner.

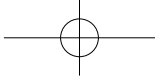
Unit 3

Part I Illustrated Words and Expressions



EXERCISE 1

- | | |
|--------------------------|--------------------------|
| 1. Roller shutter casing | 2. External window sill |
| 3. Outer reveal | 4. Shutter rail |
| 5. Built-in frame | 6. Access panel |
| 7. Curtain rail | 8. Sealing rope |
| 9. Parapet wall | 10. Internal window sill |
| 11. Inner reveal | 12. Glazing |
| 13. Casement frame | 14. Pelmet |



Part II Reading and Translating



Passage A



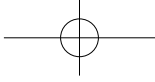
EXERCISE 2

1. Either bricks, precast concrete blocks or in-situ concrete.
2. No, they aren't. The requirements for the blocks and the loads to be carried by the blocks are different, so the sizes of The blocks vary considerably and the quality of the concrete also varies.
3. Partly because less skilled labour is required in building with them and partly because walling can be erected far quicker than with bricks.
4. One is to treat the external face of the wall with several coats of a tar or bitumen substance, with or without felt. Another is to incorporate a waterproofing admixture, properly proportioned, to the cement, aggregates and water before the concrete is mixed.
5. It mainly depends on the load to be carried and the particular position of the walling.
6. Where heavy loads are to be carried or dampness exists, a denser concrete is needed. By increasing the quantity of cement, by the use of sound hard aggregate, by vibrating the concrete, and by conforming strictly to the concrete proportions of all the materials in the concrete, concrete can be made denser.
7. They are often built of lightweight materials, covered with certain forms of cladding, such as lightweight precast concrete blocks, hollow clay blocks and timber studding covered with plaster board, fibreboard, matchboarding plywood, chipboard, resin bonded blockboard.
8. They should be built of bricks or dense pre-cast blocks, because sound insulation is the utmost important.



EXERCISE 3

1. bricks
2. precast concrete blocks
3. in-situ concrete
4. moulded
5. standard sizes
6. decorative
7. lightweight blocks
8. the speed of erection
9. internal walls
10. the same materials as the other types of walling
11. two



12. nonload-bearing
13. load-bearing
14. their low resistance against fire
15. pressed steel
16. plastics
17. tiles
18. glass
19. prefabricated
20. easily removed



EXERCISE 4

English	Chinese
	预制块
precast concrete floor	
	预制混凝土墙板
precast hollow concrete block	
	预制接缝
precast joint filler	
	合资企业
joint of framework	
	木工装修作业
finish coat	
	成品水泥
finished product	
	墙筋隔断
stud pin	
	中心立柱墙
	预制装配式建筑
prefabricated part	
	预制楼梯平台
prefabricated panel	
	大型砌块结构
block diagram	
	办公大楼
block of houses	
	用模子把泥土做成人像
mouldboard	

续表

English	Chinese
	(表示船壳形状的)型线
a casting mould	
	粘合土
bond force	
	混凝土与钢筋间的结合力
bond stress	
	用隔板将起居室和餐厅隔开
sliding partitions	
	两个房间中间的夹板墙
partitions in award	



EXERCISE 5

1. 实体墙通常采用砖、混凝土砌块砌筑或用钢筋混凝土浇筑而成的。
2. 砖的制作具有标准的尺寸,使其易于砌筑并可按一定的规则搭接,以保证墙体间的连接可靠。
3. 这些混凝土砌块,尤其是轻质的加气的
4. 混凝土砌块正在被广泛使用,一方面是因为它的砌筑技术比较简单,易于普通工人操作;另一方面是因为用混凝土块材砌筑墙体比砖块快捷得多。
5. 几年前被广泛使用的墙筋隔断现在已不大普遍了,主要是因为它们的耐火性能低。

Passage B



EXERCISE 6

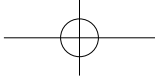
Aesthetically, the design intent of the Hong kong Shanghai Bank was to create a singular simple form, which distinguishes itself from a distance when viewed in context with numerous other new office towers presently being constructed. This is achieved by a slight "twist" of the tower form, creating a subtle reflective geometry of surfaces which change continuously as one views the building while driving along San Miguel Avenue.

Part III Simulated Writing



EXERCISE 7

1. It has five exceptional features-giant investors, American concept, excellent location, fashion apartment design, and modern plan.
2. Great price, location, design, community spirit and unique finishing.
3. It looks artistic.



续表

4. American Goodview Holding Limited and Zemmax are the investors, and Beijing Xin Feng Real Estate Company Ltd. is the developer.
5. Residence, commerce and travel services.
6. In a unique business area.
7. The Beijing Real Estate Excellent Apartment Award.
8. State of the art technology.

**EXERCISE 8**

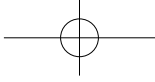
English	Chinese
	外销
	外贸
foreign policy	
	着重治疗的医学机构
research-oriented medical establishment	
	房地产 / 不动产
	个人资产 / 动产
land estate	
	自豪地拥有一个完善的游泳池
boast a beautiful lake	
	获一等奖
	获奖
win a race	
	满足某人的特殊要求
	为各种年龄的儿童服务
cater for varying tastes	
	目前的认识水平
the state of the art technology	
	独特的装潢
unique business area	

**EXERCISE 9**

1. b 2. a 3. d 4. c 5. f 6. e 7. h 8. i 9. g 10. j

**EXERCISE 10**

1. b 2. c 3. d 4. e 5. f 6. g 7. h 8. a



English for Civil Engineering

Part IV Listening and Speaking



EXERCISE 11

- A: Is that Mr. Green?
B: Yes. Who's speaking, please?
A: This is Mr. Smith, John Smith. My company is sending me to Beijing on business. I'll have to go although I'm busy with work here.
B: When are you leaving?
A: Tomorrow evening on the 9:00 train.
B: I'll see you off at the station, if you like.
A: Great. Please have dinner with me so that we can talk over the insurance company deal.
B: Good idea. I've been wanting to get a chance to talk about it.
A: So have I. Should we meet at Hongyun Restaurant at 7:00 this evening?
B: OK. See you at the restaurant then.
A: See you there.



EXERCISE 12

To work out how much it would cost to keep the air in her meeting room clean.



EXERCISE 13

1. F 2. F 3. T 4. T



EXERCISE 14

1. Thank you. We are pleased to provide professional construction management for this project.
2. This is around our cost estimate.
3. This is only a rough estimate.
4. We'll make possible your occupancy on schedule.



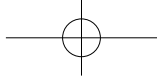
EXERCISE 15

1. g 2. f 3. a 4. k 5. c 6. d 7. b 8. e 9. j 10. i 11. h



EXERCISE 16

1. We think your management approach is best suited to the requirements of the project.
2. We should try to finish the exterior building before winter.
3. Are all the appropriations available now?



4. What's your consideration about the project duration?
5. Further information about cost estimates, cost criteria and budget considerations will be included in our documents.

Tapescript

Dialogue

- A: Is that Mr. Green?
- B: Yes. Who's speaking, please?
- A: This is Mr. Smith, John Smith. My company is sending me to business. I'll have to go although I'm busy/with work here.
- B: When are you leaving?
- A: Tomorrow evening on the 9:00 train.
- B: I'll see you off at the station, if you like.
- A: Great. Please have dinner with me so that we can talk over the insurance company deal.
- B: Good idea. I've been wanting to get a chance to talk about it.
- A: So have I. Should we meet at Hongyun Restaurant at 7:00 this evening?
- B: OK. See you at the restaurant then.
- A: See you there.

Passage

Mrs. Green was the manager of a large company, and she frequently had to have meetings with other business people in a room in her building. She did not smoke at all, but many of the other people at the meetings did, so she often found the air during the meetings terrible. One day, after an hour at a meeting, her throat and eyes were uncomfortable and she was coughing a lot, so she called a big air conditioning company and asked them to work out how much it would cost to keep the air of her meeting room really clean. After a few days the air-conditioning company sent in two estimates for Mrs. Green to choose from. One estimate was for \$5 000 to put in new air-conditioning, and the other was for \$5.00 for a sign which said, NO SMOKING.

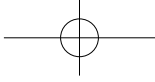
Unit 4

Part I Illustrated Words and Expressions



EXERCISE 1

- | | | |
|-------------------|--------------------|----------------------|
| 1. Eaves flashing | 2. Ridge flashing | 3. Capping |
| 4. Wall flashing | 5. Valley flashing | 6. Edging strip |
| 7. Apron strip | 8. Pipe collar | 9. Lining |
| | | 10. Chimney flashing |



Part II Reading and Translating



Passage A



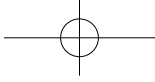
EXERCISE 2

1. They're always composed of concrete, hardcore beds and mesh reinforcement.
2. To prevent dampness rising through the concrete from the ground below.
3. Three of them: (a) plain or reinforced concrete filling between r.s.js. (b) reinforced concrete slabs alone, or combined with reinforced concrete beams (c) combined reinforced concrete and hollow pot construction.
4. To reduce the dead weight and therefore permit a greater life load.
5. 5 metres.
6. Where the span is too great, or the load too heavy, for a single floor.
7. R.s.js.
8. By fixing strutting between them at a regular intervals.
9. Wherever an opening occurs in a floor.
10. Two: one is tonguing and grooving; the other is secret nailing.



EXERCISE 3

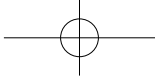
1. divide
2. concrete
3. beds
4. reinforced
5. carry
6. single
7. Double
8. joists
9. span
10. load
11. double
12. joists
13. binders
14. angles
15. walling

**EXERCISE 4**

English	Chinese
	楼层标尺
storey post	
	平房
the upper storey	
	地面层
double floor	
	楼层高度
floor plan	
	刚性结构
frame construction	
	建筑工地
construction loan	
	托梁
rolled steel joist	
	搁栅承座
joist ceiling	
	企口
tongue-and-groove joint	
	企口板桩
tongued and grooved floor	
	薄边板
insulation board	
	布告栏
the board of honour	

**EXERCISE 5**

1. 楼面即是将建筑物分成层面的水平面。
2. 楼面既可以用耐火材料，如混凝土建造，也可以用木材建造。
3. 在地面下面铺设聚乙烯薄膜以防止地下的潮气透过混凝土上升。
4. 含有加劲梁的钢筋混凝土楼面可以提高楼面强度及其承载力。
5. 在单层楼板里，支撑梁可用来承受下面天棚的石膏板、木板、膨胀金属板条、灰泥或其它材料等的荷载。



English for Civil Engineering

Passage B



EXERCISE 6

Nullifire System S has a long track record in both official test stations and in real fire situations. Its proven performance in long term use enables you to specify with total confidence. Its fire resistance can last up to two hours. It can be safely used on internal or external steelwork, and it can be applied before the cladding is fixed to speed up construction. It contains no fibers and can therefore be used safely in areas such as hospitals or where delicate electronic instruments are manufactured or used.

Part III Simulated Writing



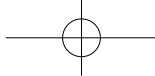
EXERCISE 7

1. high-performance
2. two components
3. gloss finish
4. hard wearing
5. coating
6. solvents and odour
7. marine and freshwater fish farming
8. interior decorative paints
9. all applications



EXERCISE 8

English	Chinese
	环氧树脂粘剂
epoxy resin mortar	
	水基载色剂
water based paint	
	就地组装
on-site management	
	很难赞成
thoroughly approve	
	不含溶剂
the absence of odour	
	远离污染
move away from noise	
	室内装饰油漆
interior decorative materials	
	适合郊游
ideal for swimming	

**EXERCISE 9**

1. e 2. a 3. f 4. b 5. d 6. c

**EXERCISE 10**

1. c 2. b 3. a 4. d 5. e 6. f

Part IV Listening and Speaking**EXERCISE 11**

A: May I see the manager?

B: I'm afraid he isn't in. Is there anything I can do for you?

A: Yes, I have brought some of catalogues machine tools. I wonder if any of your endusers would like to have a look at them.

B: They certainly would. Would you leave them With me?

A: We are suppliers of machine tools of various types. I think your endusers will be interested in some of our new products.

B: We're thinking of ordering some special kind of machine tools. We would be interested in your products if they are of the types we want.

A: As you probably know, we also take orders for machine tools made according to specifications.

B: How long would it take you to deliver the orders?

A: Three months at most.

B: I think our manager will be interested in What you said. Can you come again tomorrow?

A: OK I'll come again tomorrow morning.

**EXERCISE 12**

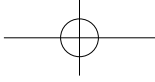
They dimmed their lights.

**EXERCISE 13**

1. F 2. T 3. T 4. T.

**EXERCISE 14**

1. We'd like to have a look at your temporary site facilities.
2. Here is our precast yard for reinforcement concrete piles. These two gantry cranes are set for the piles handling.
3. I think you should have a shed for the precast yard.



English for Civil Engineering

4. But in my observation, 6 inches is sufficient.



EXERCISE 15

1. d 2. e 3. f 4. n 5. l 6. j 7. c 8. k 9. b 10. m 11. i 12. g 13. h 14. a



EXERCISE 16

1. What is the capacity of these gantry cranes?
2. This bending machine can process the rebar with a diameter of 40 mm.
3. They'll have to reduce their quotation.
4. In this way, the original contract price for this item may decrease by 10%.
5. My visit to the site yesterday gave me more reasons for my opinion.

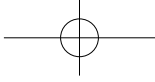
Tapescript

Dialogue

- A: May I see the manager?
B: I'm afraid he isn't in. Is there anything I can do for you?
A: Yes, I have brought some of catalogues machine tools. I wonder if any of your endusers would like to have a look at them.
B: They certainly would. Would you leave them With me?
A: We are suppliers of machine tools of various types. I think your endusers will be interested in some of our new products.
B: We're thinking of ordering some special kind of machine tools. We would be interested in your products if they are of the types we want.
A: As you probably know, we also take orders for machine tools made according to specifications.
B: How long would it take you to deliver the orders?
A: Three months at most.
B: I think our manager will be interested in What you said. Can you come again tomorrow?
A: OK. I'll come again tomorrow morning.

Passage

Edison had made a lot more inventions than any other Americans of his day. When he died in 1931, Americans wondered how they could best show their respect for him. One suggestion was that the nation observe a minute or two of total blackout. All electric power would be shut off in homes, streets, and factories. Perhaps this suggestion made Americans realize fully what Edison and his inventions meant to them. Electric power was too important to the country. Shutting it off for even a short time would have led to complete confusion. A blackout was out of the question. On the day of Edison's funeral, many people silently dimmed their lights. In this way they honored the man who had done more than anyone else to put the great force of electricity in his countrymen's hands.



Unit 5

Part I Illustrated Words and Expressions



EXERCISE 1

- | | | | |
|------------------------|---------------|------------------|-----------------|
| 1. Roof covering | 2. Rafter | 3. Strut | 4. Ridge purlin |
| 5. Intermediate purlin | 6. Post | 7. Collar beam | 8. Eaves purlin |
| 9. Purlin | 10. Top chord | 11. Bottom chord | 12. King post |

Part II Reading and Translating



Passage A



EXERCISE 2

1. Because there are not only different types of roofs, but many different materials used in their construction.
2. Flat roofs and pitched roofs.
3. Timber.
4. No, they are often constructed with a slight fall in order to enable the rainwater to run off.
5. Weltd jointing, because it's effective in expansion and contraction of the metal covering.
6. The degree of the pitch or slope.
7. Four. They're lean-to or single-pitch roofs, gable or double-pitch roofs, hip roofs and valley roofs.
8. For additional support.
9. To provide further support to the ridge purlin.
10. Wall plates.



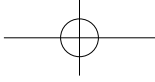
EXERCISE 3

- | | | | | | |
|-----------|-------------|------------|---------------|------------|------------|
| 1. varied | 2. flat | 3. pitched | 4. simple | 5. less | 6. fall |
| 7. pitch | 8. material | 9. steeper | 10. disposing | 11. larger | 12. higher |



EXERCISE 4

English	Chinese
	平屋顶



续表

flat beam	
	瘪了的车胎
a flat plateau	
	斜屋顶
pitched truss	
	斜凿面
pitch plate	
	屋顶烟囱
chimney top	
	烟囱道
chimney draught	
	平顶搁栅
ceiling load	
	天花板
ceiling trimming	
	系墙铁
wall plate	
	山墙
wall column	



EXERCISE 5

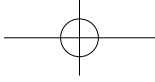
1. 木材是大多数屋面的主要建筑材料。
2. 尤其是在有火险的地方，目前多采用经适当覆盖的钢筋混凝土平屋顶屋面。
3. 简单的平屋顶屋盖由木承梁组成，并铺以木板，最后再铺几层油毡防水。
4. 屋面的垂直边缘及靠墙的顶层油毡通常用厚些的无机物浸渍的油毡。
5. 屋面的坡度越陡，则越能迅速地排卸雨雪。

Passage B



EXERCISE 6

Computers can be of assistance in many aspects of project planning and control. Critical path scheduling is one of the applications of computers in construction. Computers can help estimators in most phases of their work. They can be used in developing crews and evaluating the productivity of labor and equipment. In addition, they can be also used in cost control, quality assurance and procurement.



Part III Simulated Writing



EXERCISE 7

1. Employer 2. Agreement 3. part 4. execute 5. remedy 6. provisions 7. null
8. perform 9. said 10. force 11. effect 12. damage 13. Guarantor 14. award



EXERCISE 8

English	Chinese
	责令他履行合同
to be bound by an agreement	
	缔约
enter into society	
	执行命令
execute one' s duties	
	补偿损失
remedy a mistake	
	免除某人的债务
release the guarantor from the liability	
	共同的利益
mutual efforts	
	按规定
in conformity with a law	
	因缺少有经验的手
in default of paying the fine	



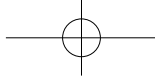
EXERCISE 9

1. c 2. d 3. a 4. g 5. b 6. e 7. f



EXERCISE 10

1. bind themselves, their successors and assigns jointly and severally for the payment
2. the Employer of the one part' and the Contractor of' the other part
3. the said Contract; according to the true purport; intent and meaning thereof
4. satisfy, and discharge the damages sustained "by the Employer thereby up to the amount of the above-written Guarantee.



English for Civil Engineering

5. release the Guarantor from any liability under the above-written Guarantee

Part IV Listening and Speaking



EXERCISE 11

- A: Good morning. Can I help you?
B: Good- morning. I have an appointment with Mr. Zhang.
A: Are you Mr. Rodgers?
B: Yes, that's right.
A: I'm sorry, but Mr. Zhang is busy at the moment.
B: May I have the number of his beeper call?
A: I'm afraid he would not like to be bothered. Can our assistant manager deal with it?
B: But I doubt if he knows something about the matter.
A: Is it about the size of the reinforcement bars we have ordered?
B: Yes. That's it.
A: Well, Mr. Zhang has had a discussion about it with our assistant manager.
B: In that case I think I can have a talk with your assistant manager.



EXERCISE 12

You should not be discouraged and you should keep on studying.



EXERCISE 13

1. T 2. F 3. T 4. F



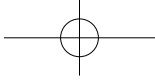
EXERCISE 14

1. Your company has been accepted to enter the next stage for tendering of the project.
2. We will study them carefully and be reasonable in dealing with them.
3. Is the contract price a lump sum or a rates basis one?
4. Can you explain in more detail these key points?



EXERCISE 15

1. g 2. k 3. i 4. a 5. m 6. n 7. o
8. l 9. e 10. h 11. b 12. d 13. j 14. f 15. c

**EXERCISE 16**

1. The conditions in this document are worked out on the basis of FIDIC Conditions.
2. The Letter of Agreement is the promise of the Contractor to the Employer.
3. These documents are extremely important for you to win the project.
4. You should fulfill and submit these documents according to the requirements.
5. These documents should be signed by the legal representative of the Contractor.

Tapescript**Dialogue**

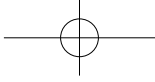
- A: Good morning. Can I help you?
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A: Are you Mr. Rodgers?
B: Yes, that's right.
A: I'm sorry, but Mr. Zhang is busy at the moment.
B: May I have the number of his beeper call?
A: I'm afraid he would not like to be bothered. Can our assistant manager deal with it?
B: But I doubt if he knows something about the matter.
A: Is it about the size of the reinforcement bars we have ordered?
B: Yes. That's it.
A: Well, Mr. Zhang has had a discussion about it with our assistant manager.
B: In that case I think I can have a talk with your assistant manager.

Passage

When you study a foreign language, you should be realistic. If you set impossible goals for yourself you can only be disappointed in your progress. Studies have shown that learning takes place this way: first, you make a lot of progress and you feel very happy. Then your language ability seems to stay the same; you believe you are not learning anything at all and you feel disappointed with yourself. This period can last for days or even weeks, but you must not be discouraged. At some point your language ability will again take another big jump and you'll see that you really have been learning all along.

Unit 6**Part I Illustrated Words and Expressions****EXERCISE 1**

- | | | | |
|---------|--------------|---------------|----------------------|
| 1. Bolt | 2. Bolt head | 3. Washer | 4. High tensile bolt |
| 5. Nut | 6. Split pin | 7. Coved weld | 8. Flat weld |



English for Civil Engineering

- | | | | |
|----------------|------------------|------------------|------------------|
| 9. Camber weld | 10. V-weld | 11. Fillet weld | 12. Welded joint |
| 13. Splice | 14. Splice split | 15. Gusset plate | 16. Junction |

Part II Reading and Translating



Passage A



EXERCISE 2

1. Because prefabricated construction saves time, and decreases loss of trade or rent.
2. The prefabricated units are 'entirely or almost entirely produced in a factory and transported to the site.
3. Careful planning, diligent supervision by the designer, the utmost standardization, clear liaison between the factory and site organizations and effective transport are essential.
4. Because the problem of transportation doesn't exist at all. Proper coordination between the site and the adjoining unit-producing yard will provide units, as and when required, and the standard attained in many production yards are very high.
5. Erecting a framework of load-bearing precast reinforced concrete horizontal perimeter beam units and vertical mullion units.



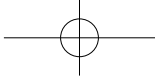
EXERCISE 3

1. a far more variety in the shapes and sizes of prefabricated units
2. prefabricated construction
3. effectively and attractively
4. factory industrialized/system building
5. on-site industrialized
6. very high standard of precision
7. high quality
8. effective transport
9. co-ordination between the site and the unit producing
10. concrete



EXERCISE 4

English	Chinese
	岩块的破裂
a disruption of telephone service	
	建筑单元 / 构件



续表

unit area loading	
	成套发电设备
unit air conditioner	
	邻近建筑物
adjacent block	
	临近过道
adjacent to the highway	
	交叉图
intersection design	
	街道交叉口
	联系通
close liaison	
	完善的联络
secret liaison	

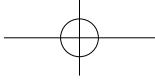
**EXERCISE 5**

1. “时间就是金钱”这句众所周知的话在商界被反复倡导，对推行更快速的施工方法产生了巨大的影响。
2. 所以预制装配式结构理所当然地在工业和商业领域中受到青睐。
3. 在努力解决快速提供足够的房屋或公寓来满足不断增长的人口需求这一严重问题方面，预制装配式结构被证明是更加可行的。
4. 事实上，在今天的工业与民用建筑中，几乎所有的施工都能采用预制构件达到高效而完美的效果。
5. 这种施工方法就是工业化建筑方式，或称为系统建筑方式。

Passage B**EXERCISE 6**

The high-efficiency and energy-saving wastewater treatment technique is a synthetic wastewater treatment technique integrating new processes and technique of wastewater treatment, new aeration devices and computer aided design. It is a systematic engineering of wastewater treatment technique. The advantages of the wastewater treatment processes and technique lie in running steadily, the qualities of discharge achieving or even excelling the request of state norms(GB 8978-88).

Part III Simulated Writing**EXERCISE 7**



English for Civil Engineering

the Main contractor, the Subcontractor, five, Name of the Works, Location of the Works, Scope of the Works, nine, part of this agreement, the sum of \$15 600 000, Oct. 23rd, 1997, all matters, mutual considerations



EXERCISE 8

English	Chinese
	制定协议
come to an agreement	
	为某事与某人签订合同
carry out a contract	
	位于山下
be situated on the Thames	
	招标
	开标
public tender	
	履行所有责任和义务
perform one' s duties faithfully	
	正在建造的桥梁
a car under repair	
	按照特别优惠的条件
(up)on the terms of the Contract	



EXERCISE 9

1. c 2. b 3. a 4. e 5. d 6. f 7. h 8. g
9. i 10. k 11. j 12. l 13. o 14. n 15. m



EXERCISE 10

1. b 2. a 3. C 4. D

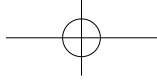
Part IV Listening and Speaking



EXERCISE 11

A: Could you give me a brief account of your product?

B: Yes, of course. I'd like to give you our latest catalogue and price list so you can get a general idea of our products now available.



A: Very good. Thanks. But would you give me one more copy? I'd like to give it to my manager so he can study it carefully.

B: Certainly.

A: Thank you.

B: After you go over this catalogue and price list, I'll take you to the sample-room to have a close look at our samples.

A: Oh, that's very kind of you. I'm sure I'll find something we are interested in.

B: Our products have enjoyed a high reputation and have always met with approval in the market

A: I can see that. You are the leading manufacturer in this field in your country. I hope we can have business cooperation with each other.



EXERCISE 12

Because America is a nation made up of people from all over the world.



EXERCISE 13

1.T 2.F 3.T 4.T



EXERCISE 14

1. Can you prove that your method is reliable for this project?
2. Can we use loading pressure instead of vacuum pressure?
3. We can shorten the construction period of the soil consolidation by 6 months.
4. It seems that there is not enough area for production facilities.



EXERCISE 15

1.e 2.g 3.f 4.j 5.h 6.k 7.i 8.a 9.c 10.d 11.b



EXERCISE 16

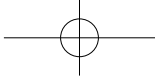
1. This method worked very well with similar geological conditions in some works we did before.
2. Our test operation shows that the bearing capacity will meet the requirement for the location of the main building.
3. The soil loading pressure is much slower than the vacuum pressure for soil compacting.
4. We use that piece of land for precasting yard only for a short period of time.

Tapesript

Dialogue

A: Could you give me a brief account of your product?

B: Yes, of course. I'd like to give you our latest catalogue and price list so you can get a general idea of our products now available.



English for Civil Engineering

A: Very good. Thanks. But would you give me one more copy? I'd like to give it to my manager so he can study it carefully.

B: Certainly.

A: Thank you.

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A: I can see that. You are the leading manufacturer in this field in your country. I hope we can have business cooperation with each other.

Passage

Perhaps the main thing to remember about American society is that it is very informal and very tolerant of different social behaviors. Remember that America is a nation of immigrants, it is made up of people from all over the world, all of whom bring their own traditions and habits with them. Thus one needn't worry much about proper behavior: who sits next to whom at the dinner table, what is the appropriate dress for the occasion, etc. Americans are very direct people. When they want something, they say "yes" and when they don't they say "no". Furthermore, if they want something different from what is offered, they ask for it.

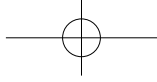
Unit 7

Part I Illustrated Words and Expressions



EXERCISE 1

- | | |
|------------------------------|-------------------|
| 1. Half brick wall | 2. One brick wall |
| 3. One and a half brick wall | 4. Cavity |
| 5. External skin | 6. Internal skin |
| 7. Cavity wall | 8. Arch |
| 9. Brick lintel | 10. Vault |
| 11. Honeycomb wall | 12. Tie |



Part II Reading and Translating



Passage A



EXERCISE 2

1. When the proposed path of a road or railway is obstructed by a hillside, a waterway or some form of construction.
2. When intensely hard rock might well make tunnelling extremely difficult and the cost is too high.
3. Building flyovers and underpasses.
4. They are sub-pavement tunnels and "tubes".
5. To provide a ramped connection.
6. Modern equipment and its ingenuity.
7. Benoto-Vederpile walling and "I.C.O.S-Veder" diaphragm reinforced concrete walling.
8. Through tremies.
9. By temporarily placing a steel pipe having an outside diameter equal to the width of walling, in the trench at the end of each section.
10. It acts as the end shuttering for the concrete.



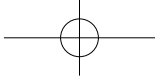
EXERCISE 3

1. path
2. obstructed
3. obstacle
4. tunnel
5. expensive
6. system
7. equipment
8. laborious
9. underground
10. supporting
11. bentonite
12. process



EXERCISE 4

English	Chinese
construct a bridge	
make a choice	
alternative ways	
	证明不太昂贵
prove to be less important	
	处理问题
cope with crises	
	位于较深处
be situated at a center	
	特别有效
perfectly successful	
supported by boxes	



English for Civil Engineering

	通过特制抓斗
by means of special tools	
	与墙同宽
equal to the height of the chimney	
	超过 6 米长
exceed 10 inches in depth	
	起模板作用
act as a top cover	



EXERCISE 5

- 事实上,人们常常发现,尽管建设隧道造价很高,但从长远来看仍比任何其它方式经济。
- 这两种根本不同的类型是地下道和地铁,后者位于地下更深处。
- 通常,建设一条倾斜道路,把已有的道路交通系统与地下延伸道路连接起来比较简单直接。
- 明挖地槽的两壁用桩子和木架支撑。
- 通过临时插入一根钢管,形成施工段之间垂直的施工缝。

Passage B



EXERCISE 6

Group 1

- ground floor
- passage
- hall
- covered area
- utility room
- terrace
- outdoor living area
- utensil room
- alcove
- pantry

Group 2

- asbestos milling
- stacking bays
- Lorry loading
- settling tanks
- moulds stockyard
- substation
- accessories store
- open storage area
- hardwaste recovery
- dispatch control

Group 3

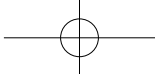
- cap plate
- base plate
- stanchion
- camber
- anchor bolt
- stiffener plate
- cleat
- oblong slot
- top boom
- suspension rod
- fillet weld
- angle purlin

Part III Simulated Writing



EXERCISE 7

- John Hill, Li Ming, Substructure contract, drawings, specifications, review, conform
- Jiang Feng, queries, dated, slab, scope, substructure, connections
- reference, confirmed, Employer, supply, main, site, assistance



续表



EXERCISE 8

English	Chinese
	金融中心
trading center	
cultural center	
	附上一套详细说明
enclose a set of photos	
	地下建筑合同
sales contract	
purchase contract	
	提供电力
provide services	
	进一步的帮助
further discussion	



EXERCISE 9

1. d 2. a 3. g 4. b 5. h 6. e 7. f 8. c



EXERCISE 10

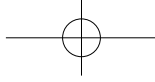
1. in receipt of, from which, the latest drawings, the specification enclosed, confirm accepting
2. With reference to, as follows, The site powersupply, The arrangement of the circuit, clear up

Part IV Listening and Speaking



EXERCISE 11

- A: Could you possibly make delivery more promptly ?
B: Er...I'm afraid not. As you know, it takes time to get the goods ready, make out the documents and book the freight space.
A: But the selling season is drawing near. We should be very grateful if you can make delivery in less than a month.
B: In less than a month? I feel it very difficult to meet your requirements as there is no stock available for export now.
A: Could you be so kind as to find some ways to solve the problem?



English for Civil Engineering

B: Well, we'll have to talk with our manufacturer.

A: Please inform us as soon as you get a definite answer from the manufacturer.



EXERCISE 12

He wanted to find out which animal was the cleverest.



EXERCISE 13

1. F 2. F 3. F 4. T



EXERCISE 14

1. But it is not clearly mentioned.
2. When will we be informed of the total compensation we are entitled to receive?
3. Do you need our further material for convincing the claim?
4. But it is a necessary procedure regulated in the Contract.



EXERCISE 15

1. n 2. 9 3. m 4. l 5. C 6. k 7. f
8. d 9. j 10. e 11. b 12. a 13. h 14. i



EXERCISE 16

1. This should be regarded as a Variation Works because it was not included in the Construction Drawings and the Bill of Quantities
2. We had to carry out the Works according to the original drawings.
3. Let us examine all the steps of the construction sequence before we make up the conclusion.
4. We still hold that it should be considered as an increased cost and time extension.
5. We will raise the claims we consider reasonable and effective to the Board of Directors of the Employer.

Tapescript

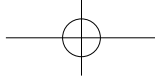
Dialogue

A: Could you possibly make delivery more promptly?

B: Er...I'm afraid not. As you know, it takes time to get the goods ready, make out the documents and book the freight space.

A: But the selling season is drawing near. We should be very grateful if you can make delivery in less than a month.

B: In less than a month? I feel it very difficult to meet your requirements as there is no stock available for export now.



A: Could you be so kind as to find some ways to solve the problem?

B: Well, we'll have to talk with our manufacturer.

A: Please inform us as soon as you get a definite answer from the manufacturer.

Passage

A university professor recently made several tests with different animals to find out which was the cleverest. He found out that the monkey was cleverer than other animals.

In one test the professor put a monkey in a room where there were several small boxes. Some boxes were inside other boxes. One small box had some food inside it. The professor wanted to watch the monkey and find out how long it would take the monkey to find the food. The professor left the room. He waited a few minutes outside the door. Then he got down on his knees and put his eye to the keyhole. What did he see? To his surprise he found himself looking into the eye of the monkey. The monkey was on the other side of the door and looked at the professor through the keyhole.

Unit 8

Part I Illustrated Words and Expressions



EXERCISE 1

- | | | | |
|-------------------|-------------------|----------------|-----------|
| 1. Crawler-loader | 2. Concrete mixer | 3. Tower crane | 4. Roller |
| 5. Excavator | 6. Power shovel | 7. Boom | 8. Bucket |
| 9. Grab | 10. Shovel | 11. Drum | |

Part II Reading and Translating

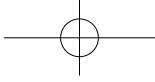


Passage A



EXERCISE 2

1. It can improve a country's economy and promote cordial relations between people of various nations.
2. Landscaping, hedge, and tree planting on the sides and central reservations must be arranged.
3. Nowadays, people regard it as an integral part of the road, and no longer as merely the formation on which to build a road.
4. It consists of adding granular or cohesive material to the subsoil to improve its grading.
5. It performs the whole process in one passing operation.



English for Civil Engineering



EXERCISE 3

1. efficiency 2. prosperity 3. relations 4. volume 5. speed 6. subsoil 7. stability
8. mechanical 9. purpose 10. nature 11. slight 12. unimpeded 13. clear 14. cyclists
15. pedestrians 16. monotony 17. landscaping 18. hedge 19. trees



EXERCISE 4

English	Chinese
	深刻的影响
profound meaning	
	通过交通旅行的媒介作用
through the medium of culture	
	为了最好地服务于这个目的
to make use of the natural resources to the best advantage	
	照明良好的
well educated	
	保持充足的湿度
retain sufficient temperature	
	预计的容量
the increased sales volume	
	坡度为 35 度
a gradient of 25°	
	设置栅栏
laya hedge	
	富有诗意的景色
a lovely/beautiful landscape	



EXERCISE 5

1. 道路能使工业中心与商业中心之间的交通变得安全可靠、畅通无阻，极大地促进经济的发展。
2. 今天，人们意识到，路基土不仅仅是路基，更是道路的重要组成部分。
3. 保持路基层稳定的方法很多，最简单的方法是机械稳定法。
4. 优质道路的重要性无论怎样强调都部为过。
5. 现代道路应该按照预计的车流量和车速进行设计。
6. 为了保持足够的湿度而确保内聚力，有必要加入少量的氯化钙。

Passage B



EXERCISE 6

In the construction industry, it is highly probable that actual costs incurred in the production process will differ from those predicted, i.e. cost variances will occur. If a variance occurs which cannot be adequately explained, more detailed investigation will be necessary to establish the causes of the variance. The predicted cost of labor may be obtained from the estimators' data--the estimate for that particular project. The cost will have been calculated by multiplying an estimated time for the execution of the work by the standard wage rate. And the actual labor cost of that project is the actual hours multiplied by the actual wage rate.

Part III Simulated Writing



EXERCISE 7

Fax 1

- | | | | | |
|--------------|--------------|------------------|-------------|-------------|
| 1. answers | 2. award | 3. bound | 4. standing | 5. follow |
| 6. tendering | 7. reference | 8. discrepancies | 9. Bill | 10. pricing |

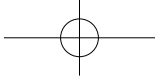
Fax 2

- | | | | | |
|------------|---------------|-----------------|--------------|-----------------|
| 1. two | 2. contractor | 3. constructing | 4. site | 5. substructure |
| 6. removal | 7. definite | 8. locations | 9. available | 10. diaphragm |



EXERCISE 8

English	Chinese
	特殊条款
special treatment	
	同等效力
equal pay	
	工程量清单
bill of lading	
	中文文本
French version	
	澄清差异
clarify facts	



English for Civil Engineering

	煤气管道
oil pipe	



EXERCISE 9

1. f 2. a 3. i 4. b 5. j 6. c 7. g 8. d 9. h 10. e



EXERCISE 10

1. g 2. d 3. e 4. a 5. b 6. f 7. c

Part IV Listening and Speaking



EXERCISE 11

A: Well, Mr. Zhang, I'd like to talk over with you about the shipment.

B: What do you have to say about that?

A: As your products are badly needed by our users, we hope you could make immediate shipment.

B: Immediate shipment? Oh, Mr. Wang, I'm afraid it's impossible.

A: May I know the reason?

B: There are no direct vessels from here to your port during these two months.

A: You mean we'll have to allow for transshipment if we want an early delivery?

B: Yes, you can have transshipment in Hong Kong if you like.

A: We'll agree if we can get an early delivery.

B: Then I'll go immediately and book shipping space in the earliest vessel.



EXERCISE 12

People who are paid for the sport they play.



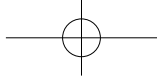
EXERCISE 13

1. F 2. T 3. F 4. T



EXERCISE 14

1. It is due to the bad weather. We can speed up when the weather permits.
2. Your rearrangement must not affect the general schedule.
3. It was held up because of the delay of your approval of equipment procurement.
4. Can you try to do it within 25 days?

**EXERCISE 15**

1. d 2. f 3. g 4. h 5. e 6. c 7. b 8. a

**EXERCISE 16**

1. The Key Dates of completion are too tight to reach.
2. There is no room for discussion for the Key Dates fixed in the Tender Document.
3. If your schedule can't match the Key Dates, it will be a big problem for the erection contractor.
4. We'll submit our modified section schedule to you for approval.

Tapescript**Dialogue**

A: Well, Mr. Zhang, I'd like to talk over with you about the shipment.

B: What do you have to say about that?

A: As your products are badly needed by our users, we hope you could make immediate shipment.

B: Immediate shipment? Oh, Mr. Wang, I'm afraid it's impossible.

A: May I know the reason?

B: There are no direct vessels from here to your port during these two months.

A: You mean we'll have to allow for transshipment if we want an early delivery?

B: Yes, you can have transshipment in Hong Kong if you like.

A: We'll agree if we can get an early delivery.

B: Then I'll go immediately and book shipping space in the earliest vessel.

Passage

The word "sport" first meant something that people did in their free time. Later it often meant hunting wild animals and birds. About a hundred years ago the word was first used for organized games. This is the usual meaning of the word today. People spend a lot of their time playing football, basketball, tennis and many other sports. Such people play because they want to. A few people are paid for the sport they play. These people are called professional sportsmen. They may be sportsmen for only a few years, but during that time the best ones can earn a lot of money. For example, a professional footballer in England earns more than 30 000 pounds a year. The stars earn a lot more. Famous sportsmen can advertise things like watches and food. They allow the companies to use their names or a photograph of them and they are paid for this. Sport is no longer just something for people's spare time.



参考译文

第一单元

第二部分 阅读与翻译

阅读 A



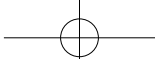
设计过程简介

大多数优秀的园林建筑师都要经历反复分析和创造性思考过程，也就是设计过程，才能使所完成的场地设计方案恰到好处地满足一切必需的要求，达到既经济又给人以美感的效果。设计过程的作用不少，其中包括：

1. 为设计方案提供逻辑和结构框架；
2. 确保形成的方案能够适合给定的设计环境（场地、客户的要求、预算等）；
3. 有利于客户通过研究各种可行方案来决定场地的最佳用途；
4. 作为向客户阐明并维护其方案的依据。

设计过程有时也可以称为“解决问题的过程”。它包括若干步骤，这些步骤通常（并非必然）有先后顺序。一般说来，建筑师、工业设计师、工程师以及科学家们都采用同样顺序来解决问题。对场地设计人员来说，其设计过程一般包括下列步骤：

1. 与客户签合同
2. 研究与分析（包括踏勘场地）
 - A. 基地平面图制备
 - B. 场地清理（数据收集）和分析（评价）
 - C. 会见客户
 - D. 制定计划
3. 设计
 - A. 理想的功能分析图
 - B. 场地相关功能分析图
 - C. 设计草图
 - D. 构图研究
 - E. 初步设计
 - F. 总体设计
 - G. 详细设计
4. 实施
 - A. 施工
 - B. 绿化



5. 养护

6. 完工后的评价

以上这些步骤是设计工作的理想过程。实际上，许许多多的这些步骤都是相互重叠和兼容的，彼此的分界并不十分明显。况且，有些步骤彼此并列同时进行。例如，会见客户与制定计划可以同时进行，而场地踏勘与场地分析也可以是同时进行的；在另一些场合，可能有必要重复前一步骤。例如，因为某个数据当初被忽视，或某个人对场地的印象需要加深，设计阶段开始之后，也会有必要重新踏勘场地或再次与客户洽谈。

设计新手必须懂得，完美而实用的设计方案不会像变魔术一样从天上掉下来。没有任何奥妙的公式或神秘的心境可毫不费力地提出好的设计方案。而设计方案决不是只用铅笔在纸上画画就可提出来的。实用而给人以激情的设计要求作大量敏锐的观察、分析、研究、推敲和再推敲，外加一定的灵感和独创性。应该注意，提出一个设计方案确实包括理性方面（调查、分析、计划编制和施工知识）和直觉方面（把式样和造型结合起来的感受、美学欣赏能力等）。因此，设计过程就是一系列设计步骤的总框架，它把理性和直觉两个方面结合起来，有助于设计人员组织自己的工作、思维和情感，以作出最佳的设计方案。

阅读 B



伦敦世纪大厦

世纪大厦位于伦敦市中心。这幢95层高楼大厦耸立在波罗的海交易所(Baltic Exchange)的旧址上，1992年该交易所曾遭受爱尔兰共和军炸弹的严重破坏。

大厦顶高410米（再加上35.9米高的旗杆），比加纳利码头(Canary Wharf)的主楼(250米)还要高，是当前英国最高的办公大厦；它也比欧洲现在最高的大厦，法兰克福的新商业总部(Commerzbank Headquarters) (307.5米)高，这幢大厦也是由富士特合伙公司(Foster and Partners)设计的。

大厦的自由造型设计是由不同类型的玻璃形成的一系列的连续曲线，随全年太阳光线的变化而变化。大厦的顶部是分叉的，分成两个高度不一样的尾翼，使大厦的每个角度的景色都很独特。两个尾翼内都有高质量的住宅单元，可以观赏到伦敦壮丽的景色。除套房外，大厦还提供高空办公室、商店、餐馆和花园等。其中一个离地面312.5米高的玻璃长廊可供公众观赏激动人心的伦敦全景。

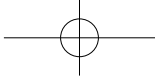
第三部分 模拟套写

Specimen 1

麦德莲橱柜

麦得莲橱柜店专门定做麦得莲橱柜，大约4周可以取货。

只要购买10件或10件以上的麦得莲“设计者”或“设计者 II”系列橱柜，您就可免费得到一个价值381美元的洗涤槽！详情请到本店咨询。



English for Civil Engineering

麦得莲橱柜 优惠72%!

美国制造

麦得莲橱柜, 款式高雅, 三大系列, 供您选择。“划时代”系列, 质量好, 满足任何预算。“设计者II”系列, 价格合理, 美观大方, 空前绝后。“设计者”系列可与最豪华橱柜媲美, 外观独特, 款式庄重、豪华。麦得莲橱柜, 专门为您定制。

把这梦幻厨房搬回家吧!

11种不同的饰面, 41种用橡木、枫木、樱木、山核桃木制作, 以及白色柜门款式。

本店共有216种橱柜供您选择!

Specimen 2

思克诺橱柜

本店为您定做思克诺橱柜, 大约2-3周可以取货。

只要购买12件或12件以上思克诺“选择”系列或“豪华”系列橱柜, 您就可免费获得一个价值279美元的洗碗机。详情请到本店咨询。

思克诺橱柜 优惠69%!

美国制造

思克诺橱柜, 推出三大系列, 供您选择。“价值”系列, 款式多样、规格齐全、配有各种附件。“选择”系列, 手工制作, 工艺精美, 大批量生产价格。“豪华”系列, 手工打磨, 美观高雅, 柜门款式, 多种多样。硬木框架, 质量优良, 使您的橱柜具有上乘家具的美观和耐用。

9种不同的饰面, 30种用橡木、槭木、樱木、山核桃木制作, 以及银白色柜门款式。

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第二单元

第二部分 阅读与翻译

阅读 A



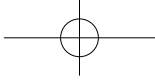
基础

基础的作用是承受结构的荷载, 并将其均匀地向更大更深的范围传递, 避免不均匀的沉降。基础的尺寸和类型取决于地基的自然状况以及地基所承受的荷载。土体的承载力即是单位面积上地基所能安全承受的最大荷载。

即便在同一施工场地, 由于地基的性质有很大差异, 土体的承载力也不相同。所以, 即使基础能承受相同的荷载, 要为整个结构设计如相同尺寸的基础并不总是可能的。为了在不同的地基条件下提高基础的承载力, 在浇注基础前, 通常用碎石垫层加固或用强度低的混凝土来填充土质松软的地方。

基础通常有素混凝土和钢筋混凝土两种类型。基础底面应设置于冻结线以下, 以避免冻土会将其顶起。图1是承重墙下面素混凝土基础的示意图, 图2为独立柱下的钢筋混凝土基础的示意图。

独立柱通常支撑在矩形的钢筋混凝土基础上。在这些独立柱间隔密集的地方, 柱下应设置条形基础



以承受整排柱子传下来的荷载，就象承重墙下的条形基础一样。

混凝土基础不必总是用钢筋来加固。但是，若承受的荷载很大，而且地基的承载力又比较低，通常有必要用钢筋进行大力加固。若承载力特别低或土质差异巨大，通常多用片筏基础支撑一般的建筑物。这种基础就是一块上面可以砌墙的钢筋混凝土厚板。若要在土质差的地方建高层建筑，经常采用不渗水的钢筋混凝土箱形基础，它也可用作地下室。

若将基础建在地基土层较差的地方，其基坑的深度必须大于常规深度，以使基础落于较坚实的地基上。若在合理的深度内找不到坚实的地基层，那就要采用深基础，如通常采用的钢筋混凝土桩基础。

素混凝土基础

- 图1:
1. 上部墙体
 2. 连接钢筋
 3. 模板
 4. 水平施工缝
 5. 自然土体
 6. 素混凝土
 7. 垫层
 8. 应力扩散角
 9. 自然坡角

钢筋混凝土基础

- 图2:
1. 上部柱
 2. 钢筋
 3. 箍筋
 4. 施工缝
 5. 弯起钢筋
 6. 素混凝土垫层
 7. 持力层
 8. 软土层
 9. 基底配筋

阅读 B

德国重新考虑分区供暖

分区供暖似乎一直作为德国传统方式的一部分，但由于政府削减经费终于面临紧张的局面。为改造前东德的破烂不堪的管道而投入的大量资金于1995年终止。

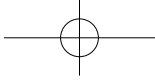
此项工作根本没有完成，东西德的一些基本建设工程已被搁置。地方政府也在降低支出。市场紧缩导致了更大的集中（特别是城区管道供应商）和竞争的加剧。虽然价格由于精确核定而降低，但同时通过欧洲建筑立法，质量标准提高了。

管网业（目前以12家公司为代表）已采取了不同的策略，有一家公司被控告企图建立行业垄断。似乎能受益的两种主要途径是推动出口和引进新技术。后者的最好例子是所有管路系统采用塑料管，用塑料管来代替通常用的钢管和铜管。分区供暖设计的趋势有利于采用塑料管，特别是管径在100毫米范围内更是如此。比如降低了供暖水流的温度（更多的低温空间采暖系统已开始应用），分散供暖的CHP系统（仅需要相对小的配水干管）应用变得更加普遍。

更何况，全部采用塑料管符合节省费用的要求，因为它可以连续铺设200米而不用接头和膨胀装置。长远看，对区域供暖的最大威胁将来自天然气的使用。

Specimen 1

Lowe五金店为您定做新型百叶窗！
每扇仅为697美元，您的最佳选择。
规格23英寸X 42英寸；
白色或乳白色



English for Civil Engineering

1英寸厚的铝片百叶窗。

底板防止儿童捅破；百叶片真正挡光；不弯翘，不褪色；烤漆不含铅；支架高贵典雅；托架板内嵌在轨道内。货号为：53631-7456。

第三部分 模拟套写

Specimen 2

Saltillo牌地砖

易于安装

我们拥有生产安装地砖的整套生产线及附属设备

每平方英尺99美分

墨西哥生产的12英寸×12英寸Saltillo牌地砖

麻面；手工制作；可用于室内或室外；光滑的底面易于铺设；8”和4”也有现货；独特的风格与众不同。货号为：37091。

Specimen 3

旋转窗

上下窗可倾斜开启，易于清洗。

规格齐全，难以罗列

92美元

24英寸X38英寸

中空玻璃，木框

窗框经防腐处理；密封条起到节能作用。

货号为：78738。

第三单元

第二部分 阅读与翻译

阅读 A



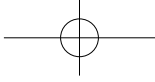
实体墙和隔墙

实体墙

实体墙分为外墙和内墙，它们分别用于分隔房间或承担建筑中楼盖和层盖的荷载。另外，外墙的设置也起着挡土的作用。

目前，实体墙通常采用砖、混凝土砌块砌筑或用钢筋混凝土浇注而成的。所谓砖是指将粘土模制成适当形状和尺寸规格后再进行烧结。将其砌筑成实体墙后，其强度高，承载力，耐久性足以抵御气候变化。

通常的砖都具有一定的尺寸和规格，这样易于砌筑。砖块之间可按一定的规则搭接，以保证墙体间



的连接可靠。砖也可以烧成不同的颜色，具有不同的光洁度，尤其可以满足某些特殊的装饰需要。

混凝土砌块是将拌合好的混凝土浇注在模子中，养护至凝固而制成。在砌筑时根据墙体的尺寸不同，采用不同尺寸的混凝土砌块；根据墙体承担的荷载大小，采用不同强度等级的混凝土砌块。目前，混凝土砌块尤其是轻质的加气混凝土砌块应用得较为广泛。因为它的砌筑技术较简单，适于普通工人操作，另外用混凝土块材砌筑墙体要比砖快捷得多。

同混凝土块材墙体一样，近年来，越来越多的建筑都使用现浇的钢筋混凝土实墙体，主要原因是施工速度快。如图3所示，只需将搅拌好的混凝土浇注到模板中，达到墙体所需要的厚度即可。墙体是采用滑模法施工的，故同一模板可以多次重复使用。如果在箱形基础、地下室中设置外墙体，由于墙的外侧与土体相接触，为了防潮，一般墙外要用沥青涂几层并设几层油毡。此外，其防潮的另一种方法就是按一定的配合比在水泥、粗细骨料和水搅拌时加入防水剂。

以由混凝土砌块砌筑的实体墙为例，墙中砌块的质量很大程度上取决于墙体所承受的荷载大小及墙体设置的位置。在需要承担较大荷载或湿度较大的地方，例如砌筑地下外墙或地下室外墙，就需采用质地密实且强度较高的混凝土砌块。要实现这一点，一般可增加混凝土中的水泥用量，使用强度高的粗细骨料，并应在块材成型时充分振捣混凝土且严格控制材料的配合比。

隔墙

一般所说的隔墙，通常是指内墙体，它所使用的材料与上述几种类型的墙体相同。若内墙体仅起间隔作用，只承受其自身重量，则称为非承重隔墙。如果内墙体同时又承受上部结构传来的荷载，则称为承重隔墙。

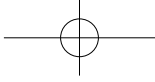
非承重隔墙一般采用轻质材料建造。如用轻薄混凝土砌块、空心砖、细木条再覆以壁纸板、纤维板、假型板、胶合板、经纤维化处理后的废纸板、松脂粘合板或各种类型的复合材料板等。图4所示为典型的加拿大木结构房屋中所采用的墙体隔断形式。墙体的隔音功能要求很高，如普通居室，甚至非承重隔墙也要用砖或混凝土砌块来砌筑。而用加气混凝土砌块和空心砖砌筑的隔墙因为其耐火和隔热性能良好也被广泛应用。

几年前被广泛使用的墙筋隔断现在已不大普遍了。主要是因为它们的耐火性能低，但另一方面，它们的隔热性能却比较强。

用于盥洗室等处的专用隔墙，通常采用冷弯压制的钢板、塑料板、石棉板、壁砖或玻璃板等构成。它们一般是预制的，分部安装而成，拆装方便。

图3 现浇钢筋混凝土实体墙

1. 横支撑板
2. 竖支撑板
3. 胶和板
4. 主钢筋
5. 连杆，伸出钢筋
6. 模板横撑
7. 标尺长度
8. 基础
9. 钢钉固定平板
10. 拉杆，轨距联杆
11. 分布钢筋



English for Civil Engineering

12. 箍筋
13. 支梁
14. 横支撑板
15. 隔离片 / 圈

图4 隔墙龙骨

1. 衬片
2. 双楣, 双过梁
3. 砌木砖
4. 副槛
5. 垫板
6. 铺地板
7. 外墙筋
8. 内墙筋
9. 墙筋
10. 护壁板

阅读 B

香港上海汇丰银行

香港上海汇丰银行总行位于马尼拉地铁站的奥第卡斯, 占据圣米格尔大道(San Miguel Avenue)和交易路(Exchange Road)交叉路口的一隅。

这座包括停车场的建筑物总建筑面积将达81 000平方米, 其中可出售的净面积为50 000平方米。香港汇丰银行将在一楼和二楼设立它的奥第卡斯顾客银行服务中心。38层楼房中, 香港汇丰银行占用10层, 其余的则归TDR公司使用。

从美学观点出发, 该建筑的设计意图是想以简单结构造型取胜, 从而使整座建筑物与许多其它正在新建的办公大楼相比, 从远处望去更显突出。只要把建筑物的结构造型稍作“扭曲”, 便可达到以上效果。这种设计可形成一种巧妙的表面反射几何形状, 只要沿圣米格尔大道驾车走过, 便可看到建筑物的形状将不断变化。

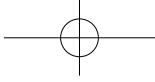
该建筑主要用于写字楼, 既出售也可租赁。这座建筑物还附设地上和地下停车场, 另建有一个直升机场, 可供顾客使用, 同时作为紧急疏散设施。

第三部分 模拟套写

Simulated Writing

中国第一商城

合理的价位、优越的地理位置、优美的设计、社区精神和独特的装潢使本工程荣登榜首! 以国内价格外销的公寓大楼。



房屋开发五大特色

中国第一商城，按照纽约庭院风格科学规划，富有艺术品位，设计内外完美。内设一个理想的俱乐部和一个大型购物中心。本工程具有以下特色：

投资浩大

本工程主要由美国古德维有限公司和卓美公司投资。

美国理念

中国第一商城，集美国和加拿大商城的最优秀设计于一体。六幢高级外销公寓大楼总面积500 000平方米。内设由200家美式风格商店构成的购物中心、两幢豪华现代写字楼和一个五星级宾馆，集居住、商业和旅游服务于一体。

优越的地理位置

中国第一商城和中国世界贸易中心、新世界京广中心组成一个黄金商业地带——一个独特的商业区。

最新公寓设计

本工程获得北京房地产优秀公寓奖，满足现代化的生活方式。

现代规划

本商城内设有玻璃拱顶的室内游泳池，采用最新工艺技术。商城设有一所学校，配有美国教师。还附设一个美国诊所。

销售热线：65031888, 65021666, 65925884, 65929982, 65925684

开发商：北京新风房地产有限公司

地址：中国 北京 朝阳区 朝阳门外 小庄6号

第四单元

第二部分 阅读与翻译

阅读 A

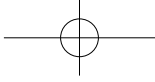


楼面

楼面即是将建筑物分成层面的水平面。楼面既可以用耐火混凝土建造，也可以用木料建造。英国普通楼房的木制上层楼面仍很常见，但在大型结构中，地面和高楼层更多地还是采用混凝土楼面。

实心地面

如果楼面承受很大的荷载，则底层的楼面几乎都是将混凝土浇注在双向钢筋上面，构成钢筋混凝土的实心地面。大多数情况下，都要在地面下面铺防水层，诸如涂一层地沥青，多层焦油沥青或沥青质材料，或聚乙烯薄膜，以防止地下的潮气透过混凝土上升。



实心上层楼面

目前大致使用以下三种类型的实心上层楼面：

1. 在热轧工字钢梁之间添加素混凝土或钢筋混凝土，如图5所示。
2. 单独使用钢筋混凝土楼板，或钢筋混凝土整体式梁板结构，如图6所示。
3. 钢筋混凝土与空心板组合结构，如图7所示。

含有加劲梁的钢筋混凝土楼面可以提高楼面强度及其承载力。这种体系常用来建造厂房和仓库的楼面。实心板与钢筋混凝土梁整浇在一起，可以减少自重以便承受更多的活荷载。

木楼面

一般来说，有两种木楼面，即：

1. 单层楼面
2. 双层楼面

所有的木楼面都用木板铺盖，详述于后。

单层楼面用作上层地面时，仅由支承于墙上的木梁组成，如图8所示。单层楼面的支座之间的距离，即跨度，不应超过5米，以便保证结构的刚度。

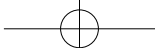
楼板梁分为主梁和次梁。双层楼面支撑在次梁上。次梁由尺寸更大的称为主梁的木构件支承。次梁与主梁成直角。主梁再由墙体支承。这种类型的楼面主要用于单层楼板支座跨度过大或荷载较大的情况下。通常，当跨度很大或荷载超过规定值时，就用轧制工字钢梁代替木梁。如果可能的话，主梁或工字钢梁应尽量置于较短的跨度之上。次梁通常刻槽后镶于主梁中，或刻槽置于工字钢梁上。如果次梁可以不开槽置于主梁之上，维持其原有厚度，就能使楼面的强度更大。

图5、图6、图7钢筋混凝土上层楼盖

1. 锥形梁
2. 轧制工字钢
3. 跨中受力钢筋
4. 分布筋
5. 上部受力筋
6. 保护层
7. 弯起筋
8. 支承长度
9. 板中受力筋
10. 钢筋混凝土梁
11. 箍筋
12. 空心砖或轻质混凝土砌块
13. 混凝土受压区
14. 肋

图8 木楼面构造

1. 粗制木板（或未经加工的木板）
2. 隔音层
3. 楼面板
4. 洞口短阁栅
5. 托梁



- 6. 支承梁
- 7. 承托
- 8. 人字形剪刀撑

在英国，为了加固楼板的支承梁并加强其强度，通常在楼板梁之间安装一定间隔的剪刀撑。既可以用最有效的坚固支撑物，也可以用人字形剪刀撑，如图8所示。

需要在楼面上开洞口的地方，无论是用作楼梯、烟筒，还是其它需要，在洞口四周设置的支承梁都要调整，并且装置在洞口处木料的尺寸通常要比楼板支承梁本身大一些。

楼板铺设的宽度是不等的。每条木板通常企口相连接，并钉在楼板梁上。有时，用一种叫做暗钉的方法来固定木板，即将钉帽隐藏起来。在单层楼板里，除承载楼板之外，支承梁还可用来承受下面天棚的石膏板、木板、膨胀金属板条、灰泥或其它材料等的荷载等。在双层楼板中，下面的天棚是由其自身下方的搁栅或支架承载的。

阅读 B

耐火系统S

1. 耐火性能好，经久耐用

耐火系统S 在正式检测站和火灾现场都留下了长久的记录，其性能已在长期使用中得到证实。你尽可以百分之百地信任它，将其列入指定产品。

2. 耐火性能可达两个小时

该产品的耐火性能可长达两个小时。如果想索取有关国家标准和耐火期的详细资料，请与我们的客户服务部联系。

3. 颜色达两百种以上

装饰漆面光滑，而且颜色达两百种以上，可以满足建筑师对具体色泽的要求。

4. 内用外用皆可

可以安全用于钢构件内侧和外侧，也可以在铺设贴面层之前使用，以便加快施工速度。（参阅使用说明。）

5. 不粘尘，光洁漆面，易于维护

与大多数防火材料不同，该产品的漆面光滑，很易清洁，且不生尘，万一发生机械事故，提供有容易使用的修理工具。

6. 安全可靠

本产品不含任何纤维，因而可安全用于医院、制造或使用精密电子仪器等的地方。

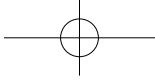
7. 加快施工速度

本产品既可选用于施工初期阶段，也可在最后的装潢阶段使用，绝不会干扰其它工序。

8. 兼容底漆

本产品可兼容最普通的底漆，这样可以指定最合适的防腐体系。

钢结构防火材料的优点			
	耐火材料	水泥质/矿物置材料	板材系统
速度	迅速一不影响其他工序	影响施工一有破裂性	安装速度慢



English for Civil Engineering

灰尘	干净, 不粘尘, 且对健康无害	工序脏乱—永远存在灰尘问题	安装过程中灰尘大
空间	很薄—节省楼面和屋顶的空间	厚	中等
重量	轻	重 / 中等	重
外表	光滑, 颜色多样	颜色均不理想	如果露在表面, 则需装璜
安装使用	可以直接贴在钢材上	通常无法直接贴在钢材上	很难通过木板固定
维护	易修, 易清洗	难修, 无法清洗	维修困难
厚度 (楼板间的空间)	薄(1-4mm)	厚(20-50mm)	厚
施工时间	很快	慢	很慢

第三部分 模拟套写

产品说明

高雅素是一种高性能, 水基环氧树脂保护膜。由两种成分组成, 其重量预先按适当的比例配好, 可随时混合, 立即可用。固化后便形成坚固而易于清洁的反光或哑光表面。

高雅素是一种耐磨、防水、防尘的水基环氧树脂保护膜。可用于各种砖、混凝土、水泥、石制建筑及石棉表面。由于不含有害溶剂, 无异味, 所以可以被食品及饮料厂使用。

- ☐ 经水质管理委员会同意, 可接触饮用水, 许可证号: 9203512。
- ☐ 通过海洋及淡水鱼养殖毒性实验。
- ☐ 像普通的室内装饰涂料一样方便使用, 一旦固化性能极高。
- ☐ 气味小, 不褪色, 适用于食品、饮料及医药领域。

第五单元

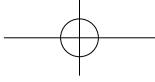
第二部分 阅读与翻译

阅读 A



楼面

房屋建设构造中的屋面式最为多样建设构造之一, 因为不仅屋盖的类别不同, 屋面所用的建筑材料也不尽相同。通常, 屋盖可分平屋顶与坡屋顶两种。而大多数屋面的主要建筑材料为木材, 与之相配的其它材料有粘土瓦、岩板、石棉瓦、油毡、沥青、铅、铜、锌、铝等。另外, 从防火要求考虑, 目前多采用经适当覆盖的钢筋混凝土平屋顶屋面。

**图9 平顶屋面构造**

1. 防渗镀锌铁皮
2. 外围护墙
3. 通风洞
4. 外饰板
5. 剖面墙压顶
6. 金属薄披水板
7. 两或三层防水油毡
8. 未加工雄雌榫接合板
9. 楼盖承梁
10. 连系梁
11. 碎石层
12. 保温毡
13. 压条
14. 嵌镶拼花板
15. 内墙体
16. 灰泥层

即使是平屋顶，其屋面在构造中也还有一定的坡度，以使雨水经此坡汇集流下。平屋顶与坡屋顶相比，其主要优点是施工简单且造价较低。

图9所示为一个简单的平屋顶屋盖，它由木承梁组成并铺以木板，再铺几层油毡防水。此例中，第一层油毡是用钉子钉在木板上的。上面的几层油毡是用热沥青粘合起来的。油毡上面铺以碎石。屋面的垂直边缘及靠墙的顶层油毡通常用厚些的无机物浸渍的油毡。

除采用油毡防水之外，在钢筋混凝土板平屋顶的豪华建筑中，为装饰需要，还常常采用薄锌板、薄铝板或薄铜板代替油毡，但很少用于木板平屋顶结构。

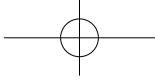
搭接贴角焊接金属薄板的老方法，现今已基本上为对接坡口焊所取代。这种新方法需要一种专门的高效率的机械装置。对接坡口焊是一种连接迅速的施焊工艺，它可以有效地保证金属盖板的胀缩。

坡屋顶的屋面

在设计坡屋顶时，最重要的因素之一是确定屋面的倾斜度，即屋面的坡度。这主要取决于屋面所用的材料。屋面的坡度越陡，则越能有效地排卸雨雪。另外，坡度越陡，则屋面的面积就越大，其造价就越高。屋顶的空间，通常称为阁楼，通常被用作辅助用房或贮藏室，坡度越大的屋顶其阁楼的空间就越大。

图10 斜坡屋面的类型

1. 屋脊
2. 山墙檐口
3. 屋檐
4. 山墙
6. 四坡屋脊
7. 天沟



坡屋顶的各种类型如下:

1. 单坡屋顶
2. 人字屋顶或双坡屋顶
3. 四坡屋顶
4. 带天沟的屋面

图10所示即为这四种类型的轮廓。

图11所示为带一个立柱的木屋顶桁架的示例。它展示的是一个普通屋顶结构的轴侧图。立柱需均匀分布,其间隔可根据设计的要求而不同。脊檩由立柱支撑,而且每端都需镶入山墙里,以作为边支撑。

图11 普通屋面结构的等角视图

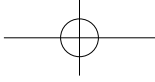
1. 山墙
2. 山墙檐口
3. 墙脊
4. 立柱
5. 烟囱墙皮
6. 对角撑
7. 脊檩
8. 屋顶烟囱
9. 烟囱管道
10. 屋面檩条
11. 上弦杆(或缘木)
12. 连系梁(或卧梁)
13. 平顶搁栅(或吊顶搁栅)
14. 屋檐

立柱两侧安有对角撑,作为对脊檩的进一步支承。屋面两坡的下方,檐口的连系梁支承在平顶搁栅之上。1如果它们实际埋置于墙体内,就把它称为卧梁。椽子钉在连系梁上,中心间距为80厘米。

图12所示为一个双柱木屋顶桁架。这种桁架主要建于跨度要求较大或屋顶空间限制较少的地方。

图12 双柱屋顶桁架

1. 连系梁(或卧梁)
2. 支柱
3. 斜撑(或支撑)
4. 螺栓双榫接
5. 支托(或托座)
6. 普通椽子
7. 脊梁(或脊檩)



8. 屋脊角(撑)板
9. 系杆
10. 檩条(或桁条)
11. 顶撑(或支杆)
12. 短樨(或暗樨)
13. 平顶搁栅
14. 补片(或垫块)

阅读 B



计算机在建筑业方面的应用

在工程计划和控制的许多方面,计算机都可以派上用场。

预算

预算员的大部分工作几乎都能借助于计算机进行。例如充分地利用小型计算机有助于实现工程量估算的半自动化,可以作出呈现工程面貌的几何形状的电子图象,甚至可以在屏幕上将其显示出来。同时,计算机可以建立一个材料清单的文件。

计算机可用来提高施工人员水平,评估劳动效率和设备使用效率。它首先可提供以往工程项目的文件资料,然后利用专门的工程程序来计算出需要多少匝索道钢缆,运土的车队需要多少车辆,要用多少模板等等。

成本控制

在较大型的建筑公司里,首先安装使用电子计算机的常常是会计部门,所以毫不奇怪,成本管理系统大都成了工资发放、会计业务、财会人员业务的扩充。一些更为先进的系统则利用了工程经济原理,把项目决策中金钱的时间价值也包括了进去。其他一些较为先进的系统与整个计划结合起来,也许还是通过数据库,对现金流量作出预报。成为控制系统的一个重要用途是能够及时向管理部门提供数据,因此,经理和监利们直接利用终端或微机中的交互式应用软件越来越成为时尚。

计划

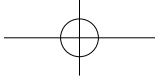
计划关键路线是计算机在建筑行业中最早的用途之一,不过经过了很长一段时间,这一方法才得以广泛承认。与成本控制一样,管理人员应该能直接予以使用。这种办法不能很快地被管理人员接受的原因是,早期的计算机的使用方法不容易被那些非数据处理人员所掌握。然而,现在甚至个人微机也有了强有力的计划工具,所以可以预料,将来会更广泛的采用量化进度计划法。

质量保证

质量保证方面的应用可以从说明书、产品规范、法规和标准的联机检索着手。质量保证系统也可帮助提供各种文件,包括程序和检测要求以及向各有关的代理人 and 当事人报告检测结果和完成的行政手续等文件。有些最先进的应用软件不仅涉及行政程序,而且涉及直接生产控制。

采购

较简单的采购系统只是会计部门应付帐款支付程序的延续,不过在一些大机构里,材料和采购系统还可以包括简单或复杂的工程材料、工具和物资等的库存管理系统。如果与数据库联通,采购系统就可以与质量保证系统连接,以对采购的物资进行检验和提供文件;也可以与帐款系统连接来评估支付系统,以便弄清楚多项目供货商间的相互关系;还可以与计划制定系统连接,来评估采购的延误将会对整



个工程的进展产生什么影响。

第三部分 模拟套写

履约银行保证书

根据本保证书，我们北京第二建筑公司注册地址为北京四和路87号（以下称承包人），和北京土建局注册地址为北京隆礼路213号（以下称保证人）在此以担保金额为人民币一千六百万元共同恪守对北京富豪房地产公司（以下称为业主）的业务。根据本保证书，承包人与保证人应保证自己，以及其继承人和受让人承担共同的及各自的对该项支付的义务。

根据以业主为一方，承包人为另一方所达成的协议，承包人已承担了合同义务（以下称为所签合同）去实施并完成某项工程，并在工程出现任何缺陷时，按上述合同中有关条款规定进行修补。

兹将上述书面保证的条件表述如下：如果承包人正确的履行和遵守所签合同中规定的承包人一方按合同的真实主旨、意向和含义应履行和遵守的所有条款、条件及规定，或者如果承包人违约，则保证人应赔偿业主因此而承受的损失，直到达到上述保证总金额。届时，本承包书所承担之义务即告终止和失效。否则仍保持完整有效。但所签合同条款，或对工程的实施、完成及修补其缺陷的性质和范围的任何变更，以及业主或监理工程师根据所签合同给予的时间宽限或业主或上述监理工程师方面对所签合同有关事宜所做的忍让或宽恕，均不解除保证人所承担之上述保证书规定的义务。但只在下述情况下保证人才承担清偿业主蒙受损失之义务：

- (a) 收到业主与承包人双方书面通知，说明业主与承包人已一致同意应向业主支付这一笔损失赔偿费；或者
- (b) 保证人收到一份与所签合同条款规定相一致的、按仲裁程序签发的并在法律上证明的裁决书副本，说明应向业主支付这一笔损失赔偿费。

代表北京第二建筑公司

由吴权明

以总经理的资格

在马永智的证明下

于2010年4月27日

代表北京土建局

由刘树凯

以局长的资格

在马永智的证明下

于2010年4月27日

第六单元

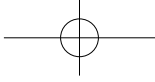
第二部分 阅读与翻译

阅读 A



预制装配式结构

众所周知“时间就是金钱”。这句话在商界被反复倡导，对推行更快速的施工方法产生了巨大的影响。传统建筑业常有拖延工期的问题，而拖延工期则意味着对房屋的出售或租赁带来经济损失，所以预



制装配式结构理所当然地在工业和商业领域中受到青睐。在努力解决快速提供足够的房屋或公寓来满足不断增长的人口需求这一严重问题方面, 预制装配式结构被证明是更加可行的, 并已经取得了长足进展。如果在建造立交桥、地下通道或服务设施采用预制结构, 就会把经常发生的公路或铁路交通的中断情况降低到最小程度。

预制结构并非新构想, 但是在过去, 由于在设计上严重缺乏统一规格, 再加上材料有限, 自然就使得这种施工方式不受欢迎。然而近年来, 由于新技术的出现, 材料的选择范围更加广泛, 以及预制构件的形状、型号多种多样, 致使这一领域发生了一场革命。事实上, 在今天的工业与民用建筑中, 几乎所有的施工都能采用预制构件达到高效而完美的效果。

一般来说, 与建筑物相关的预制装配式结构分为两种。若预制构件完全或几乎完全由工厂生产, 并被运到施工现场, 这种施工方法就是工业化建筑方式, 或称为系统建筑方式。另一方面, 如果组装构件主要是由承包人在施工现场附近的场地制作出来的, 这种方法被称为现场工业化建筑。

许多大建筑承包商已建立了他们自己的房屋系统建筑机构, 他们常常在同传统的建筑业直接的竞争中在中标方面获得成功。

工业化建筑的主要优点是能相当精确、始终高质量地生产预制构件。因而, 传统建筑中必要的容许界限就可以大大减小。当然, 要达到这些目标, 设计者细心的规划, 精心的监理以及最大程度的标准化都是必不可少的。在工厂里, 工作条件比施工现场更容易控制, 从而保证生产的持续性。由于在构件的生产过程中对雇佣的工人技术水平要求不高, 因而施工费用会有所降低。

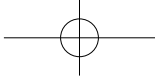
为获得最大程度的收益, 构件制造厂与现场施工的各部门需保持联络畅通。在需要这些预制构件的时候, 应准时无误地运至现场, 使现场的人力、设备与这些构件马上投入运作。如果不能很好的合作, 必将导致不必要的拖延工期, 这会使预制装配式施工方法难以实现其主要目标。

如果说生产系统要经济有效地运作的话, 那么高效运输是必不可少的环节。尽管轻质材料在一定程度上缓解了特大荷载的问题, 但大型预制构件的运输常常是一严重障碍。在这一方面, 现场预制系统有着明显的优势, 因为它根本不存在运输的问题。现场预制与附近的场地预制互相协作都会在现场需要时提供合乎要求的预制件。许多大承包商采纳了现场预制系统, 在许多生产场地获得的构件标准也相当高。他们通常搭建临时性建筑, 而且生产方式也很快实现了高度机械化。

一段时间以来, 普通或轻质混凝土一直是用于房屋和土木工程建筑预制构件生产中的主要材料。近年来, 在建造房屋、多层公寓楼, 写字楼或类似的建筑方面, 出现了许多采用混凝土构件建造房屋各个部分的专利产品。图13所示为典型的几乎完全由生产厂家制造的预制混凝土构件所组装的多层公寓大楼的布局设置。图14a和图14b所示为不同构件结点处的具体细节。对于多层公寓或类似的大型建筑来说, 另一种选择就是建造一个承重的水平圈梁和竖框预制钢筋混凝土构件框架。在它们之间填上预制混凝土的外层空心板。制成的预制件常常装有窗框、门框、服务管道、隔音装置等一并送到现场, 安装后既可装饰, 这就大大减少了现场的工作量。

图 13

1. 带窗洞的承重外墙
2. 用于起吊、测平和联接的螺栓及螺母
3. 钢筋混凝土空心楼板
4. 混凝土填充缝
5. 保温层
6. 承重外墙
7. 榫式墙片
8. 吊钩或吊环
9. 滑轮
10. 工字形梁



- | | |
|-------------|----------------|
| 11. 横向承重墙片 | 12. 减小了厚度的内隔墙片 |
| 13. 后浇混凝土楼板 | 14. 阳台板 |
| 15. 阳台挡墙 | |

图14a

- | | |
|--------------|------------------|
| 1. 轻质混凝土 | 2. 隔热层 |
| 3. 抹灰层 | 4. 吊钩 |
| 5. 榫式连接 | 6. 用于连接楼板的榫头 |
| 7. 裸露的外墙聚合表面 | 8. 构件保护层 |
| 9. 连接槽 | 10. 吊钩灌灰浆将构件连接起来 |
| 11. 连接板 | 12. 横墙片 |
| 13. 楼板 | 14. 测平螺母 |
| 15. 连接钢筋 | |

图14b

- | | |
|---------------|-------------------|
| 1. 横墙片 | 2. 后浇混凝土体 |
| 3. 螺栓、垫圈、螺母 | 4. 连系杆 |
| 5. 剪力控制区 | 6. 聚苯乙烯保温层 |
| 7. 混凝土保护层 | 8. 聚苯乙烯带 |
| 9. 潮湿情况检查通道 | 10. 温度橡胶阀 |
| 11. 外墙片内部混凝土层 | 12. 在楼板或墙片中的吊钩（环） |
| 13. 膨胀聚苯乙烯干海绵 | 14. 外墙外表面榫头 |

阅读 B

高效节能污水处理技术

本项目是集污水处理新工艺技术、新曝气设备和计算机辅助设计为一体的综合性污水处理技术，是一项污水处理技术的系统工程。

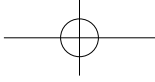
污水处理工艺技术，主要研究常温厌氧复合床——一体化氧化沟技术、侧沟式一体化氧化技术、城市污水处理技术和厌氧—好氧活性污泥法除磷技术等成套技术，并取得了一系列参数。这是一种城市污水处理、有机工业废水处理和污水除磷的先进技术。

氧化沟曝气器（YBP—1400A型曝气转盘）具有结构简单、安装维护方便、充氧能力大等特点，是氧化沟污水处理工艺的高性能国产化设备，可替代同类引进设备。

污水处理工程CAD系统是用于污水处理工艺设计中的中文计算机辅助设计的软件系统，是集设计和经济技术分析为一体，采用人机交互方式完成污水处理工程的设计。

污水处理工艺的技术优点是，运行稳定，出水水质达到或优于国家标准GB8978—88规定的要求，除磷技术的出水总磷 $<0.5\text{ mg/l}$ ，工程造价降低30%，运行成本降低5%以上。

氧化沟曝气器充氧量达 $1.33\text{ kg}_2/\text{h}$ 以上，沟内平均流速达到 $0.3\text{ m}/\text{s}$ 以上。沟深达4m以上。



污水处理工程CAD系统,是我国污水处理行业中首次开发出的系统性计算机软件,并达到了实用化要求。

第三部分 模拟套写

中华人民共和国上海金色邦迪地下建筑工程

转包合同协议

本协议于1997年4月1日由萨姆森工程与建设集团公司为一方(以下简称“承包人”)与中国上海建设工程公司为另一方(以下简称“转包人”)(其注册地址在中国上海水成路51弄37号)签定。

鉴于:

- A. 总承包商已与位于上海黄浦区189号的上海黄金沙滩房地产有限公司(以下简称“业主”)签定合同(以下简称“总合同”),完成位于上海黄浦区黄河路18号的上海黄金邦迪地下建筑工程(以下简称“工程”)。
- B. 承包人已接受转包人承担这项工程,完成以下工程(以下简称“转包工程”)的施工、竣工的投保以及修补其任何缺陷。
- C. 转包人已同意根据以下提到的规定承担施工、竣工和修补转包工程,并履行本总合同下的转包合同的所有责任和义务。

现在双方达成以下协议:

条款1: 总则

- (1) 工程名称: 上海黄金邦迪地下建筑工程
- (2) 工程地点: 上海黄浦区黄河路18号
- (3) 工程范围: 地下工程(详情请见本转包合同其它转包合同文件)

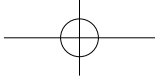
条款2: 转包合同文件

以下文件被认为是组成本协议书中的一部分,并应作为本协议书中的一部分进行阅读和解释。为避免以下文件出现歧义,文件解释优先权顺序应按这些文件所列顺序。

- (1) 转包合同协议
- (2) 转包信件
- (3) 合同特殊条款
- (4) 标准承包合同条款
- (5) 投标文件
- (6) 合同图纸
- (7) 投标书
- (8) 规范
- (9) 工程量清单

条款3: 转包合同费用

- (1) 对于下文中提到的承包人付给转包人的费用,转包人特此立约,向承包人保证在各方面遵守转



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包合同的规定, 承担施工、竣工并修补其任何缺陷。

- (2) 承包人将付给转包人壹仟伍佰陆拾万美元 (US\$ 15600 000) (以下简称转包合同资金), 或按照合同的相关一般条款和特殊条款确定其款项。

条款4: 竣工期限

转包合同完成的日期为2007年10月23日

条款5: 其他

双方将通过相互协商解决转包合同中未提到的所有事宜, 也就是说, 双方任何协商不会影响双方行使本转包合同中所规定的仲裁权利。

请参阅2007年4月29日的中标书。

签定合同双方:

承包人: 萨姆森公司工程与建设集团

转包人: 中国建设工程公司

签字人: 王洪君

签字人: 李华

本合同在以下证人在场时签定

证人: 周林

证人: 李仪

2007年4月1日

第七单元

第二部分 阅读与翻译

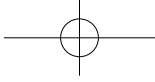
阅读 A

交通隧道建设

通常, 拟建中的公路或铁路遇到山丘、河道或其他建筑物时, 该工程的工程师就得决定能否开凿隧道从障碍物中或障碍物下穿过。决策时, 不仅要考虑经济因素, 还要权衡开凿隧道的利弊得失, 研究绕道或者跨越障碍物的可能。事实上, 人们常常发现, 尽管建设隧道造价很高, 但从长远来看仍比任何其它方式经济。然而, 有时工程师别无选择, 只有绕开或跨越障碍。例如密实坚硬的岩石使得隧道挖掘过于艰难, 造价惊人, 令人望而却步。

许多大城市的现有道路系统无法满足现代交通的需求, 故使隧道建设成了值得人们认真考虑的问题。在某种程度上, 立交桥和地下道的建设, 在加速和分流交通方面迈出了具有决定意义的第一步, 从而缓解了交通不畅的局面。但要从根本上解决交通问题, 仍须依赖地铁系统。

多年来, 世界上许多大城市都开通了地铁, 成功地解决了交通问题, 而且其中大多数城市还在扩展



其地铁线路。其它城市为了减少交通阻塞,也开始引进地铁系统。广义上讲,地下道路系统的建设可分为两种根本不同的类型:地下道和地铁,后者位于地下更深处。两种类型地下道路的施工技术近年来都有了显著改善。

城市规划部门决定建造地下道还是建造地铁,主要取决于公共交通系统的现状。人们发现,如果地面电车系统十分发达,运行正常,那么建造地下道作为对地面交通的补充比较有利。通常,建造一条倾斜道路,把已有的马路交通系统与地下延伸道路连接起来比较简单直接。另一方面,重组公共交通体系,把地铁与地面交通分开,形成独立运行的交通系统,可能更为理想。

现代化的设备和技术使得隧道建设比过去容易得多。在应用所谓的“柏林建筑体系”方法时,可首先把地槽明挖至地下12-15米处,两壁用桩子和木架支撑。图16所示为开挖建设汉堡地下四车道车站时使用的支撑系统,采用了中间打入数排钢桩的设计。通常,施工时期架设临时桥梁来保证车辆及行人通行,也需要这种建设方案。

除图16所示的方案外,人们经常使用其他明挖掘支撑法。如钢板桩以及更现代的贝诺德·维德(Benoto Veder)钢筋混凝土桩墙或I.C.O.S维德(I.C.O.S.Veder)钢筋混凝土地下连续墙等方法,目前都得到了广泛应用。因为使用以上方法,侧壁均无需横向支撑。

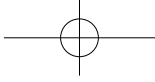
钢筋混凝土桩墙施工法是把混凝土桩紧密地排在一起,在地槽两侧形成完整的垂直支撑;地下连续墙的关键工序是脱土泥浆护壁。电动卷扬机控制的专用抓斗挖掘机挖掘地槽时,将泥浆注入,槽壁土方由此固定,槽口保持敞开,确保地槽中连续墙施工就位完毕。接着,起重机将预制钢筋笼穿过泥浆,下到地槽中,通过导管在钢筋笼周围浇筑混凝土。混凝土不断升高,“泥浆”排出。通常,地下连续墙分段施工,每段长度一般超过6米。在每个施工段的末端临时插入一根钢管形成施工段之间垂直的施工缝,该钢管外径与墙同厚,起模板作用。拔出钢管时,该施工段形成的半圆末端与下一个施工段形成一个工整的具有良好防水性能的施工接缝。使用预制钢筋混凝土梁或者现浇钢筋混凝土板会很容易将两侧地下连续墙的跨度空间连接起来,从而完成隧道的主壳。图15所示为地下连续墙的施工过程。

图15 地下连续墙的施工图

- | | |
|-----------|-----------------|
| 1. 混凝土运输车 | 2. 贮水箱 |
| 3. 搅拌桶 | 4. 出料斗 |
| 5. 钢筋笼 | 6. 储浆池 |
| 7. 正常地下水位 | 8. 起重臂 |
| 9. 液压油缸 | 10. 驾驶室 |
| 11. 机身与支架 | 12. 支腿 |
| 13. 摆动臂 | 14. 抓斗 |
| 15. 开挖地段 | 16. 接缝钢管(以后可拆除) |
| 17. 导管 | 18. 新浇筑混凝土,自下而上 |
| 19. 施工缝 | 20. 已浇筑混凝土 |

图16 地铁地下道剖面图

- | | |
|----------|-------------|
| 1. 原有建筑物 | 2. 钢筋混凝土支撑梁 |
| 3. 人行道面 | 4. 道牙 |
| 5. 路面 | 6. 基层 |
| 7. 路基 | 8. 混凝土保护层 |



English for Civil Engineering

- | | |
|-----------------|-------------------|
| 9. 钢筋混凝土柱 | 10. 临时支撑系统 (型钢横梁) |
| 11. 中间垂直支撑系统 | 12. 盖板 |
| 13. 木架 | 14. 工字钢梁 |
| 15. 管夹 | 16. 弯管头 |
| 17. 闸阀 | 18. 压力管路 |
| 19. 木支架 | 20. 纵向钢梁 |
| 21. 正常地下水位 | 22. 施工缝 |
| 23. 外桩 | 24. 钢桩接头间挡土板 |
| 25. 抽水管 | 26. 滤管 |
| 27. 潜水泵 | 28. 已施工混凝土墙 |
| 29. 降低的地下水位曲线 | 30. 混凝土垫层 |
| 31. 防水膜 | 32. 钢筋混凝土底板 |
| 33. 临时洞口 | 34. 预留插筋 |
| 35. 降低的地下水位 | 36. 基座中的钢筋混凝土横梁 |
| 37. 站台 | 38. 支撑墙 |
| 39. 轨枕 | 40. 钢轨 |
| 41. 道碴 | 42. 净空 |
| 43. 打入桩 (以后可拆除) | 44. 防水层搭接缝 |
| 45. 垂直防水膜 | 46. 放大脚 |
| 47. 现浇混凝土桩 | 48. 沙或细石混凝土填充料 |
| 49. 砖墙 | 50. 现有建筑物基础 |
| 51. 工作区 (以后回填) | |

第三部分 模拟套写

Specimen 1

发件人: 约翰·希尔

收件人: 李明先生

日期: 2007年3月15日 8时15分30秒

主题: 地下建筑合同

李先生:

关于主题工程得标意向的确认, 我方于07年3月12日曾发给贵方2套最新图纸, 现再附1套有关详细说明。

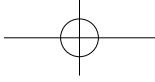
就此, 请贵方认真审阅这图纸和说明, 并于07年3月17日前予以确认。

贵方若能及早作出决定, 我们不胜感激。

此致

敬礼

约翰·希尔谨启



Specimen 2

发件人：江峰

收件人：比尔·怀特

日期：2008年3月31日10时30分35秒

主题：说明部分的质疑

怀特先生：

贵方队工程说明与合同纸的答复和确认收悉（2008年3月17日函），谢谢。现将贵方来信中的疑问作以下答复：

1. 地下建筑合同应包括1楼地面板，请参阅中标通知书第2款。
2. 地下建筑承包商应负责提供图纸与说明中所示的各部位的公用设施接头；根据序言1.61款的规定，承包商还应负责协调与公用设施部门的关系。

此致

敬礼

江峰谨启

Specimen 3

发件人：斯格特·霍尔特

收件人：贝尔·史密斯

日期：2009年5月10日9时10分10秒

主题：工现场水电应的确认

史密斯先生：

关于贵方中标通知函（合同第2款——合同函电），我方兹确认如下：

甲方（业主）为施工现场提供383 KVA的电力和100mm的主水管。

如有问题或需协助，请尽早与我方联系。

此致

敬礼

斯格特·霍尔特谨启

第八单元

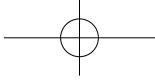
第二部分 阅读与翻译

阅读 A



现代化道路

发达的交通系统对一个国家的繁荣有着深刻的影响。道路能使工业中心与商业中心之间的交通变得安全可靠、畅通无阻，极大地促进经济的发展。公路除了为本国服务外，在紧密联系其它国家方面，也发挥着巨大作用。通过彼此交往，各国人民之间的友好关系得以加深。事实上，无论对一个国家还是对全世界来说，优质道路的重要性无论怎样强调都不为过。



为了充分发挥作用,现代道路应当尽可能具备下列主要特征:

- (a) 应按照预计的车流量和车速进行设计;
- (b) 弯度和坡度不可避免时,要尽可能平缓;
- (c) 能见度要好;
- (d) 路标设置完备醒目;
- (e) 充分考虑非机动车辆和行人的安全,他们的安全应受到足够的尊重;
- (f) 需要照明时,光线充足;
- (g) 为了避免单调、乏味,给使用者提供一个赏心悦目的环境,道路两侧要进行美化,设置栅栏,种植树木,路中心要设置分隔带。

图17中插入了一条道路的简易剖面图,图上标出了与道路建设有关的主要术语。图中向上倾斜部分是路拱,该部分的最高点是路脊。坡度变化时,出现了一个回旋曲线式的或者抛物线式的垂直曲线。

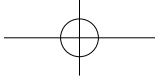
在现代道路建设中,人们对路基土重要性的认识比几年前深刻多了。今天,人们意识到,它不仅仅是路基,更是道路的重要组成部分。所以,近年来人们研究出了多种方法,来提高路基土的质量,从而达到稳定的效果。保持路基层稳定的方法很多,最简单的是机械稳定法。

机械稳定法是指在基层土中,根据土质加入颗粒状的或者具有附着力的材料。尤其在干燥气候条件下,为了保持足够的湿度而确保内聚力,有必要加入少量的氯化钙。另一种取得稳定的有效方法是,在基层土中加入水泥、石灰或者含沥青的材料。水泥、石灰使土质变硬,从而大幅度增加其压缩强度。在沥青、柏油稳定过程中,沥青、柏油乳胶或者稳定油在防水层中稳定土壤颗粒,这样,阻止了水的渗透,确保基层土的稳定,从而提高其承重能力。

以上各种稳定方法,通常由称作土壤稳定装置的机械来实施。这些机械近年来在美国应用得尤其广泛和成功。在施工过程中,它们可以一次碾压完成全部工序。首先,稳定装置切入到基层土中,把土切碎、混合,加入稳定剂,与土壤搅拌。然后,把混合物均匀摊开,以便固化。固化完毕,应立即在上面泼洒沥青乳胶,形成防水层。这不仅防止水分下渗到基层土中,也防止基层土中的水分向上渗透。

图17 四车道剖面图

- 1. 边界
- 2. 路牙
- 3. 排水沟
- 4. 路脊
- 5. 拱度
- 6. 标志牌
- 7. 里程碑
- 8. 紧急停车带
- 9. 标线
- 10. 分车线
- 11. 横向坡度
- 12. 车行道
- 13. 两盏路灯标准
- 14. 边缘
- 15. 毛石护坡
- 16. 报警电话



17. 混凝土盖板
18. 蓖子
19. 防冻层下的排水管
20. 混凝土管
21. 混凝土或砖砌检查井
22. 标志柱
23. 滤沙层
24. 防冻层
25. 地基
26. 路基和耐磨路面
27. 应急闭锁装置
28. 混凝土基座
29. 绿化带
30. 带孔混凝土排水管
31. 回填土
32. 自然土
33. 填充料
34. 涵洞
35. 绿化草坪

阅读 B

工程造价的差异

建筑业中, 生产过程中的实际造价与预算造价很有可能出入很大, 这样就发生了造价差异。如果无法解释该差异的产生, 就有必要进行更为详细的调查研究以确定该差异的原因所在。

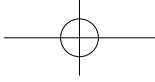
(1) 劳务差异

对劳务费用的估算, 可从预算人员对该项工程的估算数据中获得。以标准工资率乘完成该工程的估算时间就可求得预算劳务费, 而实际的劳务费用则是实际工时乘上实际工资率求得。根据这些数据可确定出产生差异的根源所在。显而易见, 劳务费用差异的产生是由于实际工时不等于标准工时, 而实际工资率也不等于标准工资率所致。标准工资率是劳资双方商定的结果, 适用于全国范围, 也可因地稍作调整。然而, 实际完成工程的时间却涉及许多可变原因, 如天气、管理水平、劳工的健康状况、报酬、奖励等。在复核功效差异时, 不可能绝对确定真正的原因, 也不可能准确予以估算, 但必须弄清楚差异是否来源于标准工时分配不当和执行有误, 是否来源于管理或实际执行。所有这些调查结果都应反复印, 供估算人员、施工研究人员和经理使用。

(b) 材料差异

高效率的采购可大大减少材料价槽差异。预算人员应获得该工程所需的报价单, 报价单上的价格应与主承包合同上的浮动补偿条款相一致。如果主要承包公司获得了合同, 这些报价单就应有相当长的有效期, 以作为定货的依据。

有多种原因会引起材料使用差异, 例如, 如果木质桁条的材料使用差异大, 需要查清是否由于偷



English for Civil Engineering

窃、损坏引起的，还是因所购材料的尺寸不对导致大量浪费，或因管理不善，在不该用的地方用了桁条？同样，为避免将来发生类似问题，反馈信息很重要。

(c) 设备费用差异

这类差异受多种因素支配，主要取决于设备是自己的还是租用的。后一种情况涉及到最短租用期的问题，这类差：异可分为价格差异和使用（或效率）差异两部分。在任何情况下，设备本身及该设备的操作人员这两个因素支配着设备的使用。因此，任何效率差异分析都必须把设备选择以及操作人员的能力等因素考虑进去。

(d) 管理差异

我们可以把管理费用分为可变费用和固定费用两种。建筑业中，管理费用是作为该工程预算的一部分来核算的，并分配到工程各阶段中，或依据该工程各阶段预算的总产值分配，或以各阶段预算的直接劳务总费用为基数分配。

第三部分 模拟套写

Specimen 1

收件人：格林先生

公司名称：格林建筑工程公司

传真号码：62752979

页数：2

尊敬的先生们：

发件人：李明

档案号码：c-178/LTR12452

传真号码：25760416

日期：07年11月4日

上海文化中心地下建筑合同投标咨询

再次就一些投标人近期的咨询，我们准备了一份投标问答表附于信后，包括投保人的查询(Q)和设计组的回答(A)，以供参考。合同一旦签订，该信函及附件均将作为合同信函，受合同约束。

此致

敬礼

李明谨启

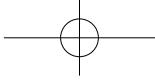
附：投标咨询

问1：合同的特殊条款：第四项第5-1 (1)款提到：“…如果上述文件用中文和英文编制，英文与中文具有相同的效力…”。然而，投标附件1第7款却说，中文文本仅供参考。我们这次应按照英文文本去投标吗？

答1：出于投标的目的，投标人应依据英文文本。中文文本仅供参考。

问2：英汉两种文本中，工程量清单的项目和数量存在差异，请予以澄清。

答2：投标人应根据英文文本中的工程量清单进行报价。



Specimen 2

收件人: 格林先生

公司名称: 格林建筑工程公司

传真号码: 62752975

页数: 2

发件人: 李明

档案号码: c-1781LTP12573

传真号码: 2576416

日期2007年11月6日

尊敬的先生们:

上海文化中心地下建筑合同投标咨询

再次就一些投标人近期的咨询, 我们准备了一份投标问答表附于信后, 包括投保人的查询(Q)和设计组的回答(A), 以供参考。

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此致

敬礼

李明

附: 投标备询

问1: 谁负责铺设施工现场的泥土石板路面?

答1: 铺设泥土石板路面将包含在打桩合同中。如有必要, 地下建筑承包商负责对其拆除与清理。

问2: 管线进线口是否穿过连续墙?

答2: 是的, 有20个管线进线口穿过连续墙。这些进线口大小不一, 有100mm煤气管道, 也有1m × 1m的电力线和电话线预留洞。在施工连续墙前, 应留出管线进线位置及其密封口的实际位置。