WORKPLACE ENGLISH OF PREFABRICATED BUILDING

装配式建筑职业英语

潘 辰 肖明和 编著



高等职业院校课程改革项目优秀教学成果面向"十三五"高职高专教育精品规划教材

装配式建筑职业英语

Workplace English of Prefabricated Building

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内容提要

本书从培养面向装配式建筑工程行业第一线需要的高素质技能型人才的目标出发,从生产、运输、建设、服务和管理等多个方面,提供了建筑工程专业技术人员在职业岗位中所需要的英语语言知识和交际应用材料。本书在高职高专英语公共课学习的基础上,围绕听、说、读、写、译五项能力进行训练,旨在培养学生的英语综合应用能力、综合文化素质和跨文化交际意识,特别是在装配式建筑工程职业环境下运用英语交流、沟通、协调和处理业务的能力,为未来职业能力提升提供可持续发展的保障。

本书可作为高职高专院校装配式建筑相关专业的教材,也可供建筑工程相关技术人员参考、自学使用。

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FOREWORD 📋 🖹

当前我国的建筑业正处在产业现代化的全面发展提升过程当中,按照国家推进供给侧结构性改革和新型城镇化发展的要求,装配式建筑凭借其节能环保等方面的优势已成为国内建筑行业企业未来发展的主要方向。另外,在国家"一带一路"倡议下,建筑产业的国际化发展迅速,很多建筑企业走出去服务沿线国家并获得了成功经验。为了学习引进国外先进建筑技术,服务产业转型升级,有效配合国家"一带一路"倡议支持优质产能走出去,突出职业专业英语特色,进一步促进高职院校专业英语教学实践的改革和发展,培养适应发展需求的、有国际视野的技能型应用人才,我们编写了《装配式建筑职业英语》一本。

我们通过广泛调研,在深入了解企业行业单位用人要求和高职高专英语实际教学需求的基础上,精心策划并编写了本教材。本教材遵循教育部高等教育司提出的"立足使用、打好基础、强化能力"的高职英语教学原则,以"工学结合、能力为本"的职业教育理念为指导,以培养学生在未来工作中所需要的英语应用能力为目标,采用独特的教学模块,使学习者真正掌握装配式建筑职业环境下需要的英语知识和技能,特别是工作过程中的英语交际能力,真正体现高职英语教学的职业性、实践性和实用性。

本教材顺应高职院校英语教学专业化发展的趋势,充分体现了职业英语教学理念,主要具有以下几个方面的特点:

- 一、创新的教学理念。本教材着眼于提高学生的综合职业素质,将语言学习与职业技能培养有机融合,确保教学内容与教学过程真正体现职业性与应用性,力求使学生更加熟练地掌握和使用职业英语进行学习和交流。
- 二、完备的教学体系。本教材根据高职院校英语教学向专业化发展的要求,将听、说、读、写、译的基本英语技能融入每个单元特定的工作任务中。每个单元包括情景对话、精读、应用写作和常用语法四个模块,循序渐进,相互协调,构成了一个系统、完备的教学体系,更利于学生整体掌握学习内容。
- 三、职业的教学设计。本教材在对职业院校及建筑行业、企业广泛调研的基础上确定编写方案,根据建筑工程行业的工作流程、典型工作任务或场景设计教学内容。每单元浓缩一个典型工作步骤,学习任务与工作任务协调一致。

前 **声** FOREWORD

四、实用的选材内容。本教材特别选择装配式建筑工程行业和职业活动中实际应用的真实 语料作为教学材料,注重时代性、信息性与实用性,既适用于了解掌握装配式建筑工程相关知识,又有利于提高语言能力。来自现实工作中的真实选材能为学生营造真实的语境,并通过学 习内容与将来工作内容的结合提高学生的兴趣。

本教材由济南工程职业技术学院国际交流学院潘辰与济南工程职业技术学院土木工程学院 肖明和共同编写。全书由济南工程职业技术学院张慧青与澳大利亚新南威尔士州TAFE学院白 丽莎(Lisa Bale)主审。

本教材在编写过程中查阅了大量报纸、杂志和书籍,参考了有关网站的翔实资料,在此一 并向作者表示诚挚的谢意。 由于编者水平有限,疏漏和不妥之处恳请各位专家、同人不吝赐 教,以期不断修改完善。

编者

CONTENTS

目录

| | Unit One | Prefabrication and Prefabricated Building | ••• 1 |
|---|------------------|---|--------|
| | PART 1 | PRACTICAL DIALOGUE 1 | |
| | PART 2 | INTENSIVE READING 2 | |
| | PART 3 | APPLIED WRITING5 | |
| | PART 4 | GRAMMAR····· 6 | |
| | | | |
| | Unit Two | Off-site Manufacturing | ··· 10 |
| ĺ | PART 1 | PRACTICAL DIALOGUE10 | |
| | PART 2 | INTENSIVE READING11 | |
| | PART 3 | APPLIED WRITING14 | |
| | PART 4 | GRAMMAR15 | |
| | | | |
| | Unit Three | Shipment and On-site Installation | 17 |
| | PART 1 | PRACTICAL DIALOGUE17 | |
| | PART 2 | INTENSIVE READING ······18 | |
| | PART 3 | APPLIED WRITING22 | |
| | PART 4 | GRAMMAR23 | |
| | | | |
| | Unit Four | Prefabricated Steel Structure Building | 27 |
| | PART 1 | PRACTICAL DIALOGUE27 | |
| | PART 2 | INTENSIVE READING28 | |
| | PART 3 | APPLIED WRITING ·······31 | |
| | PART 4 | GRAMMAR32 | |
| | | | |
| Ī | Unit Five | Construction Safety Management | 34 |
| | PART 1 | PRACTICAL DIALOGUE34 | |
| | PART 2 | INTENSIVE READING35 | |
| | PART 3 | APPLIED WRITING39 | |
| | PART 4 | GRAMMAR39 | |

CONTENTS

| Unit Six Project Mar | nagement ····· | • • • • | 43 |
|----------------------|----------------------|---------|-----|
| PART 1 PRACTICAL | D1AL0GE43 | | |
| PART 2 INTENSIVE | READ I NG44 | | |
| PART 3 APPLIED WE | RITING48 | | |
| PART 4 GRAMMAR | 49 | | |
| | | | |
| Unit Seven Contract | t Management····· | • • • • | 53 |
| | DIALOGUE53 | | |
| PART 2 INTENSIVE | READ I NG54 | | |
| PART 3 APPLIED WE | RITING57 | | |
| PART 4 GRAMMAR···· | 58 | | |
| | | | |
| Unit Eight Quantity | Supervision ····· | • • • • | 61 |
| PART 1 PRACTICAL | DIALOGUE61 | | |
| PART 2 INTENSIVE | READ I NG62 | | |
| PART 3 APPLIED WE | RITING67 | | |
| PART 4 GRAMMAR | 67 | | |
| | | | |
| Unit Nine Inspection | and Acceptance ····· | • • • • | 71 |
| PART 1 PRACTICAL | DIALOGUE71 | | |
| PART 2 INTENSIVE | READING72 | | |
| PART 3 APPLIED WE | RITING77 | | |
| PART 4 GRAMMAR | 78 | | |
| | | | |
| 建筑专业英语词汇 | | • • • • | 80 |
| | | | |
| 建筑工程参考英语词汇 | | • • • • | 102 |
| | | | |
| Bibliography | | | 178 |

Unit One Prefabrication and Prefabricated Building

PART 1 PRACTICAL DIALOGUE

China Overseas Construction Corporation is awarded a contract for a construction project in Singapore. Mr. Zhao, the new project manager, is taking over the job from former project manager Mr. Li.

中国海外建筑公司被授予新加坡一个建筑项目的合同。新的项目经理赵先生接替了前项目经理李先生的工作。

Mr. Liːl'll take you to the construction site. Follow me, please. 我来带您去工地,请跟我走。

Mr. Zhao: Thank you. 谢谢。

Mr. Li: Here we are. 我们到了。

Mr. Zhao: Can you introduce me to the section chief on the building site? 你能把我介绍给这个项目的现场负责人吗?

Mr. Li: Certainly. This is the new project manager from China, Mr. Zhao. 当然,这是我们新来的、来自中国的项目经理赵先生。

Mr. Sun: How do you do. I'm glad to meet you. 您好,非常高兴认识您。

Mr. Li: This is section chief, Mr. Sun. 这是我们的现场负责人孙先生。

Mr. Zhao: How do you do. I'm glad to meet you, too. 你好,见到你我也很高兴。

Mr. Sun: Welcome to our building site. How long will you work here? 欢迎来到我们的施工现场,您会在这里工作多久?

Mr. Zhao: About two years. Would you introduce me to some of the other workers? 大概两年。我想跟工人们认识认识,你能帮我介绍一下吗?

Mr. Sun: Certainly. Hello, fellow workers! This is our new manager, Mr. Zhao. 当然, 嘿, 伙 计们, 这是我们新来的项目经理赵先生。

Workers: How are you, Mr. Zhao! 您好, 赵先生。

- Mr. Zhao: How do you do! Can I go to the building site and have a look? 大家好。我能进现场参观一下吗?
- Mr. Sun: Yeah, let's go. 好的, 我们走。
- Mr. Zhao:I think, in Singapore there are many prefabricated houses like this building. 我想新加坡有许多像这个项目一样的预制型房屋。
- Mr. Sun: Yes. The prefabricated components are all made in the casting yard. 是的。我们 这个项目所有的预制组件都是在工厂生产好了的。

PART 2 INTENSIVE READING

Prefabrication, Prefabricated Building

Prefabrication is the practice of assembling components of a structure in a factory or other manufacturing site and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located.

An example from house-building illustrates the process of prefabrication. The conventional method of building a house is to transport bricks, timber, cement, sand, steel and construction aggregate, etc. to the site, and to construct the house on site from these materials. In prefabricated construction, only the foundations are constructed in this way, while sections of walls, floors and roof are prefabricated (assembled) in a factory (possibly with window and door frames included), transported to the site, lifted into place by a crane and bolted together.



The most widely used form of prefabrication in building and civil engineering is the use of prefabricated concrete and prefabricated steel sections in structures where a particular part or form is repeated many times. It can be difficult to construct the formwork required to mould concrete components on site, and delivering wet concrete to the site before it starts to set requires precise time management. Pouring concrete sections in a factory brings the advantages of being able to re-use moulds and the concrete can be mixed on the spot without having to be transported to and pumped wet on a congested construction site. Prefabricating steel sections reduces on-site cutting and welding costs as well as the associated hazards.

Prefabrication techniques are used in the construction of apartment blocks, and housing developments with repeated housing units. The quality of prefabricated housing units had increased to the point that they may not be distinguishable from traditionally built units to those that live in them. The technique is also used in office blocks, warehouses and factory buildings. Prefabricated steel and glass sections are widely used for the exterior of large buildings.

Detached houses, cottages, log cabin, saunas, etc. are also sold with prefabricated elements. Prefabrication of modular wall elements allows building of complex thermal insulation, window frame components, etc. on an assembly line, which tends to improve quality over on-site construction of each individual wall or frame. Wood construction in particular benefits from the improved quality. However, tradition often favors building by hand in many countries, and the image of prefab as a "cheap" method only slows its adoption. However, current practice already allows modifying the floor plan according to the customer's requirements and selecting the surfacing material, e. g. a personalized brick facade can be masoned even if the load-supporting elements are timber.

Prefabrication saves engineering time on the construction site in civil engineering projects. This can be vital to the success of projects such as bridges and avalanche galleries, where weather conditions may only allow brief periods of construction. Prefabricated bridge elements and systems offer bridge designers and contractors significant advantages in terms of construction time, safety, environmental impact, constructability, and cost. Prefabrication can also help minimize the impact on traffic from bridge building. Additionally, small, commonly used structures such as concrete pylons are in most cases prefabricated.

Vocabulary

prefabrication *n*. 预先制造; 预加工 assembling *adj*. 装配的 manufacture *n*. 制造; 制造业 conventional *adj*. 传统的; 惯例的

prefabricated building 装配式建筑 component *n*. 成分;组件 transportation *n*. 运输;运输系统 aggregate *n*. 合集;集合体

roof n. 屋顶: 最高处 crane n. 吊车 formwork n. 样板 precise adj. 精确的 cottage n. 小屋 hazard n. 危险 sauna n. 蒸汽浴室 thermal adj. 热量的 insulation n. 绝缘 material n. 材料 avalanche n. 泥石流 constructability n. 施工能力 minimize vi. 最小化 concrete adj. 混凝土的 pylon n. 桥塔 distinguishable from 和……相比 **Exercises** 1. Read the passage and answer the questions. (1) What is prefabrication? (2) What is the most widely used form of prefabrication? (3) What aspects can prefabrication techniques be used for? (4) How to distinguish the prefabrication from the conventional construction? (5) What aspect can prefabrication save for? 2. Tell whether the following statements are true or false. (1) The conventional method of building a house is to transport bricks, sand to the) construction site. (2) The most widely used form of prefabrication is building and civil engineering.) (3) Prefabrication techniques can't be used in housing developments.) (4) Prefabrication wastes engineering time on the construction site in civil engineering) projects.) (5) Prefabrication can help maximize the impact on traffic from bridge building. 3. Translate the following sentences into Chinese.

(1) Prefabrication is the practice of assembling components of a structure in a factory, and transporting complete assemblies to the construction site where the structure is to be located.

- (2) Prefabricating steel sections reduces on-site cutting and welding costs as well as the associated hazards.
- (3) The quality of prefabricated housing units had increased to the point that they may not be distinguishable from traditionally built units to those that live in them.
 - (4) Prefabrication of modular wall elements allows building of complex thermal insulation.
- (5) Prefabrication saves engineering time on the construction site in civil engineering projects.

PART 3 APPLIED WRITING

Writing the site record is a basic work for a site engineer, especially for a new civil engineer. Try to fill in the following form as a site engineer.

Construction Report

| Project Name | | Subentry project name | | Item | | | | |
|--|--|---|--|-------------------------------------|--|--|--|--|
| Contractor | | Subcontractor | | Drawing No | | | | |
| Checkpoint | Standard code | Construction u self-inspection(measu | | Supervision unit acceptance records | | | | |
| | | | | | | | | |
| Construction unit self-inspection conclusion | Inspector: | | | | | | | |
| | Construction unit technical in charge: | | | | | | | |
| Supervision unit | | | | | | | | |
| acceptance conclusion | Supervision en | gineer: | | date | | | | |

PART 4 GRAMMAR

Indefinite Pronoun

常见不定代词用法

▶some 的用法

- (1) some 通常指不定数量"一些",修饰代替可数名词复数或不可数名词,既可以指人,又可以指物。常用在肯定句中。
 - e. g. He has some Chinese paintings.

Some like sports, others like music.

- (2) some 也可以用在表示"请求,建议,反问"的句子中,期待得到对方的肯定回答。
 - e. g. Would you like some coffee?

Didn't he give you some books?

- (3) some 有时可以修饰单数可数名词,表示"某个"。
- e. g. This morning, some boy asked for you.

There must be some reason for what he's done.

- (4) some 也可以修饰数词,表示"大约"。
- e. g. It took me some twenty days to get there.

▶any 的用法

- (1)不定代词 any 和 some 一样,表示不定数量"一些",修饰和代替可数名词复数和不可数名词,既可指人,又可指物。但一般用在否定句、疑问句、条件从句中。
 - e. g. Ask me if you have any questions.

Do you have any questions to ask?

I don't know any of the students.

Do you have any questions? If you have any, don't hesitate to ask me.

There isn't any tea left. I'll go and make some for you.

- (2)用于肯定句中,表示"任何一个",修饰单数可数名词和不可数名词。
- e. g. I don't know any of you.

Any child can answer that question.

▶no 的用法

(1) 不定代词 no 只有形容词性质。一般做定语来构成否定句,表示"不是""没有"。

- (2) 用于警告、命令等。
- e. g. No Parking!
- (3) 修饰表语时,有特殊的意思。试比较:
- e. g. I am no teacher.

I am not a teacher.

▶none 的用法

- (1) none 只具有名词性质,可以代替人和事物,表示"三者(以上)都不""没有一个人(一件事物)"。做主语时,如果谈到的是所有人的情况,动词多用复数形式;如果谈每个人的状况,则多用单数形式。它在句中还可充当同位语。
 - e. g. None of us are / is afraid of difficulties.

None of them has a bike.

None of the machines is/ are working.

None of us can sing this song.

(2) none 和 neither 的区别。

none 表示 "在三个或三个以上当中,没有人或物……",而 neither 指 "在两个当中,没有人或物……"。

e. g. None of the students has ever read the book.

Neither of my parents has ever read me book.

▶both 的用法

both 的意思是"两个都", 具有名词和形容词的性质, 可做主语、宾语、同位语和 定语。做主语时谓语动词用复数。

e. g. Both would like to have a try.

Both are very honest.

We asked both to put forward their suggestions.

These two pictures are very beautiful. I like both.

Give us some bread. We both want to try a bit.

They both skate well.

You can take both of them.

Both men were interested in the job.

a. both 后常跟 of 短语, of + 名词、代词 (复数),接复数名词时 of 常省略,接复数 代词时 of 则不省略。

Both (of) the films were very good.

Both of them are good teachers.

b. both 在句中还用作同位语,其位置取决于谓语动词的形式。

(1) 做主语同位语时,如谓语为实义动词(包括用作实义动词的 have), both 位于主语之后、谓语动词之前。

We both had a haircut. 我俩都理了发。

(2) 如谓语部分为系动词, both 则位于系动词之后、表语之前。

The children were both too young.

(3) 如谓语是含有助动词或情态动词的短语, both 则位于助动词或情态动词之后。 My parents have both been invited.

You must both come over some evening.

▶all 的用法

- (1) 当 all 做主语时,常代表三个以上的人,谓语动词用复数形式;指事物或情况时,往往表示"一切""所有的"意思,常被看作单数意义,谓语动词用单数形式。当 all 做定语时,既可修饰可数名词,也可修饰不可数名词。all 具有名词和形容词性质,常表示"全体""所有的""一切"的意思;在句中可用作主语、宾语、表语、定语、同位语或状语。
 - e. g. All are here.

All is known.

She has told me all about it.

Bill visited all of us.

That's all.

Is that all you can help me?

All the apples in that box go bad.

They have all gone to America.

We all want to have a try.

He is all excited.

She was all wet.

- (2) 当 all 用作主语时,如果后面跟有人称代词,须在它们之间加上 of;如果后面跟的是名词,它们之间可加 of,也可不加。
 - e. g. All of them are from Beijing.

All (of) the books are here.

- (3) 当 all 做同位语时,它在句中的位置随谓语动词而定。当谓语动词是实义动词时, all 放在动词前面;谓语动词是 be 时, all 放在 be 后面;谓语是由情态动词或助动词加实义动词组成时, all 放在它们之间。
 - e. g. They all know the answer.

They are all students.

You can all go home.

- (4) 当 all 用作人称代词宾语的同位语时, all 放在宾语后面, 如 you all, them all, us all。
 - e. g. I'll have to think about them all again.

▶each 的用法

each 具有名词和形容词的性质,在句中可用作主语、定语、宾语和同位语;指每个人或事物的个别情况,相当于汉语的"各个"。

e. g. Each of the boys has a bike.

There are flowers on each side of the river.

Two men came. Could I give a book to each?

The teacher gave the pupils four textbooks each.

We each have a new school bag now.

Unit Two Off-site Manufacturing

PART 1 PRACTICAL DIALOGUE

Drawings 图纸

Adam: Can you read drawings? 你会看图纸吗?

Bob: Yes/No. 会/不会。

Adam: Please bring the ...drawing here. 请把……图纸拿来。

Bob: I'll bring it here in a minute. / There isn't such a drawing. 马上就拿来。/没有这张图纸。

Adam: Are the drawings you brought here complete? 你拿来的图纸全吗?

Bob: Yes. /No. 全/不全。

Adam: This drawing isn't clear. 这张图纸看不清楚。

Bob: Please change a clear one. 请换一张可以看清楚的。

Adam: There is something wrong on this drawing. 这张图纸有问题。

Bob: I've found it too. It has been corrected. 我也发现了。已经改正了。

Scaffolds 脚手架

Adam: Scaffolds must be firm. 脚手架一定要牢固。

Bob: We have consolidated it already. 已经加固了。

Adam: Examine the quality of fastener first. 先检查一下扣件的质量。

Bob: I've examined. It's very good. 检查过了。很好。

Adam: It isn't allowed to put too much material on the terrace. 平台上料不准太多。

Bob: I know that. 知道。

Adam: Examine the scaffold, please. 请把这个脚手架检查一下。

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