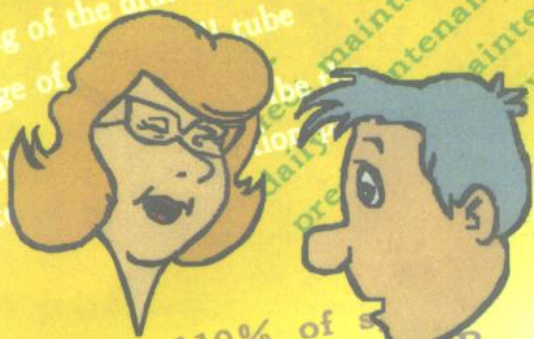


湖北省电力工业局教育处 编



It shall be 110% of s
losses based on 105% of MCR
condition feed flow.

APPLIED ELECTRICAL POWER ENGLISH
GENERATING

电力专业应用英语

发电篇

中国电力出版社



内 容 提 要

本书内容主要涉及有关火力发电厂的汽机、锅炉、电气、热控、燃料、化学等设备及其辅助系统的运行、维护、检修和施工安装等方面的常用英语。此外,为满足涉外人员交往、旅游、生活的需要,还附录了部分简易日常用语。

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前 言

随着我国电力工业进一步扩大开放,电力企业逐步融入国际电力市场,涉外事务日趋频繁。为了满足广大电力干部、职工学习掌握电力应用英语,适应电力系统运行、检修和施工人员对外工作的需要,我们组织编写了适用性较强的《电力专业应用英语》包括发电篇和供用电经营篇。

发电篇主要内容为火力发电厂系统、运行、维护和安装方面的英语用语,为便于涉外人员在国外的生活、旅游和交流,还附录了实用、简易的用语。

在编写中,本书尽量采用较短的口语化的语句、英汉对照的方式,通俗明了地介绍了常用电力英语知识,使读者易于学习和掌握,尤其是帮助涉外人员在较短时间内熟悉和掌握有关英语常用语。为了扩大词汇量,在一些句子下面,还添加了替换词。

本书由湖北省电力工业局教育处组织编写。周敬主编,参加编写的人员还有丁芳、徐涵初、谢诞梅等。本书的编写、审核,得到了湖北省电力公司和湖北电力试验研究所等单位领导、专家的大力支持,谨此表示谢忱。

编者水平有限,不足之处望读者鉴谅。

编 者

1997年11月

目 录

前言	
General Introduction to a Power Plant	
电厂概况介绍·····	1
Drawings	
图纸·····	8
Boiler and Auxiliaries	
锅炉及其附属设备 ·····	10
Turbine and Auxiliaries	
汽轮机及其附属设备 ·····	16
Instrumentation and Control	
热控 ·····	28
Electrical System in Power Plant	
电厂电气系统 ·····	32
Water Treatment System	
水处理系统 ·····	42
Water System	
水系统 ·····	45
Coal Handling System	
输煤系统 ·····	47
Coal Firing System	
燃煤系统 ·····	52
Air and Gas System	
空气和瓦斯系统 ·····	55
Ash Handling System	

除灰系统	56
Oil System	
油系统	59
Preparation for Starting the Units	
机组起动准备	61
Synchronizing Operation	
并网运行	64
Operation Management	
运行管理	67
Operation Technique of Units	
机组运行技术	70
Abnormal Operation	
异常运行	77
Accident and Failure	
事故与故障	78
Maintenance and its Management	
检修及其管理	80
Construction and Installation	
安装施工	85
Power In a Cleaner Environment	
电力的环保问题	94

APPENDIX

附录

Useful and Easy Expressions

实用简易用语	96
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Expressions for Greetings and Parting	
问候及分别时用语.....	100
At the Customs	
在海关.....	101
Introductions	
介绍.....	101
Shopping	
购物.....	102
Travel by Air	
乘飞机.....	103
Time and Date	
时间和日期.....	104
Asking the Way	
问路.....	105
At the Hotel	
在旅馆.....	106
Courtesies	
礼貌用语.....	107
Nationalities and Countries	
国籍和国家.....	108
Appointment, Request and Wishes	
约会, 请求与愿望	109
Gratitude, Consent and Suggestions	
感激, 同意与建议	109
Refusal, Disagreement and Apology	
拒绝, 不同意及道歉	110
Congratulations and Good Wishes	

祝贺与祝愿.....	111
Work and Careers	
工作及职业.....	112
Meeting	
会议.....	113
Telephone	
电话.....	114
Talking about a Family	
谈论家庭.....	115
At a Restaurant	
在餐馆.....	115
At a Post Office	
在邮局.....	117
Exchange Foreign Currencies	
兑换外汇.....	117
Seeing a Doctor	
看病.....	118
At a Barber Shop	
在理发店.....	119
Sight Seeing	
游览观光.....	120
At a Railway Station	
在火车站.....	120
Driving	
驾驶.....	121
Visiting a Friend	
拜访朋友.....	122

General Introduction to a Power Plant

电 厂 概 况 介 绍

- I hope to see a power plant. 我想参观一家电厂。
- May I have a talk with the chief engineer? 我可以同总工谈谈吗?
- How many generating units are there in this power plant? 这个电厂里有几台机组?
- What's the installed capacity of this power plant? 这个电厂的装机容量是多少?
- How many employees do you have? 有多少职工?
- How many working days are there in a week? 每周工作几天?
- How many skilled engineers and technical personnel work here? 这里有多少技术熟练的工程师和技术人员?
- Shall we have a look at the boiler? 让我们看看锅炉好吗?
- This control room is highly computerized. 这个控制室已高度电脑化了。
- How many operators are assigned here? 这儿有几个运行人员值班?
- Could you give us some intro- 您能给我们一些有关您电厂的

duction materials of your plant?

说明材料吗?

First, let me show you around the main power building of this power plant. Then we'll take a look at the ash yard over there.

首先我带大家看看这个电厂的主厂房,然后我们去看看那边的灰场。

turbine building

汽机房

water intake

取水口

boiler house

锅炉房

coal yard

煤场

deaerator room

除氧间

indoor coal storage yard

干燥棚

cooling tower

冷却塔

waterside pump house

岸边水泵房

central pump house

中央水泵房

The next important place we are going to visit is the main control building.

我们要参观的下一个重点是主控制楼。

central control building/room

中央控制楼(集控楼)/室

unit control building/room

单元控制楼/室

network control building/room

网络控制楼/室

Look from here, the top floor of the boiler steel structure. You can see other facilities of the power plant. Here is the

看,从锅炉钢结构顶层这儿,你可看到电厂的其他设施,这边是水泵房,那边是水处理厂。

pump house and there is the water treatment plant.

indoor substation

outdoor switching station

storehouse

indoor coal yard

stacker-reclaimer

wagon tipper

coal conveyor control room

hydrogen generation station

fuel oil tank

service building

The circulating water system of this power plant is a closed-cycle type of cooling system which consists of cooling tower, basin, pump house and supply/return pipelines.

We appreciate very much the introduction made by Mr. Jack, the Director of the plant.

Our delegation is very much impressed by the first-class management in your power plant.

This is the layout of our pow-

室内变电所

室外开关站

仓库

室内煤场

堆取料机

翻车机

输煤机控制室

制氢站

燃油罐

办公楼

该电厂循环水系统是闭式循环冷却系统,由冷却塔、水池、泵房以及供水/回水管路组成。

我们非常感谢电厂厂长杰克先生的介绍。

你们电厂一流的管理水平给我们代表团留下了深刻印象。

这是我们厂的平面布置图。本

er station. There are six 厂有六台660MW 机组。
660MW units here.

boiler house layout

锅炉房布置图

pipng layout

管路布置图

wiring layout

线路图

fossil-fired boiler

燃煤锅炉

oil-fired boiler

燃油锅炉

gas-fired boiler

燃气锅炉

steam turbine

汽轮机

gas turbine

燃气轮机

condensing steam turbine

凝汽式汽轮机

back pressure turbine

背压式汽轮机

impulse turbine

冲动式汽轮机

reaction turbine

反动式汽轮机

generator set

发电机组

main transformer

主变压器

To the north lay the cooling
towers. Nearby is 400kV sub-
station.

北边是冷却塔, 旁边是400kV
变电站。

main chimney

主烟囱

sewage treatment plant

污水处理厂

compressor house

空气压缩机房

hydrogen generation and stor-
age station

制氢站

ash pit

灰坑

fire station

消防站

administration block

行政大楼

cooling water pump house	冷却水泵房
control block	控制大楼
What tank is it? Is that <u>the boiler fuel oil tank</u> ?	那是什么罐?是锅炉燃油罐吗?
blowdown disposal tank	排污处理罐
buffer storage tank	缓冲水箱
sedimentation tank	沉淀水箱
clean water pond	清水池
flash tank	扩容器
lubrication oil tank	润滑油箱
This plant is located in the southeast of Hubei Province. It is one of the largest power plant in the province.	这个厂位于湖北省东南,是这个省最大的电厂。
It is a fossil-fired plant with four units. It's maximum output is 1,000MW.	这是个有四台机组的燃煤电厂,其最大输出功率为1,000MW。
How much coal is to be burnt by the boilers with all the four units in operation?	四台机组运行,锅炉要烧多少煤?
About 400 tons of coal an hour or the equivalent of one train loads a day.	约每小时 400t 煤或相当于一天一列车煤。
We place great emphasis on <u>the generation safety</u> .	我们极为重视 <u>安全发电</u> 。
equipment reliability	设备可靠性
environmental protection	环境保护

operation stability

运行稳定性

We are trying to operate and maintain our plant with the highest world standards of reliability.

我们正在努力按世界最高的可靠性标准来运行和管理电厂。

They are about to introduce natural gas as a new kind of fuel for power generation.

他们即将采用天然气作为发电新燃料。

We are making preparations for building another nuclear power plant by the end of this century.

我们正在做在本世纪末前建设另一座核电厂的前期准备工作。

Have you finished the feasibility study report on utilizing solar energy for power generation?

你已完成了利用太阳能发电的可靠性研究报告吗?

wind energy

风能

tidal energy

潮汐能

geothermal energy

地热能

wave energy

波浪能

This power plant has got extensive experience in operating 300MW units.

这座电厂在 300MW 机组的运行方面积累了丰富经验。

Because of our improvement in thermal and operational efficiencies, our operating costs have been greatly reduced and

由于我们提高了热效率和运行效率,所以大大降低了我们的运行费用,增加了收入和利润。

our revenue and profitability have been increased.

In 1995, our plant attained thermal efficiencies of 38.6% and availability of 95.2%.

Though this coal-fired power plant has run for over 50 years, its management level is impressive.

It is one of the largest fossil fired power plants in the world, with four 350MW and four 677MW generating units.

There are another six gas turbines with a total capacity of 352MW used for peak load and emergency supply.

The coal-fired generating units have achieved an overall availability of 94.44% this year, and the forced outage rate has remained extremely low at 1.07%. This corresponds to the highest world standards and shows up the high quality of the power

1995年我们电厂的热效率达到38.6%，可用率达到95.2%。

虽然这个燃煤电厂已经运行了50多年了，它的管理水平令人印象深刻。

它是世界上最大燃煤发电厂，共有4台350MW和4台677MW燃煤发电机组。

另有6台总容量为352MW的燃气轮机，供尖峰负荷和紧急供电之用。

在本年内燃煤发电机组的整体可用率达94.4%，强迫停机率极低，仅1.01%，这与世界最高的标准相吻合，显示出机组具有很高的运行水平。

plant and its operation.

In view of the high fuel costs, higher environmental standards and lower efficiency levels, the power plant was decommissioned in September 1995.

The gas turbines provided essential support to the power grid during this early summer, when the nuclear units were still unavailable and the Guangdong grid requested additional input.

由于燃料成本高昂,环保要求日趋严格,加上机组效率不断降低,这个电厂已于1995年9月停产。

今年初夏,当核电机组仍然停机,广东电网要求额外供电时,燃气轮机机组向电网提供了重要的支持。

Drawings

图 纸

Will you show me the drawings of cooling water system?

feedwater and saturated steam system

superheated steam system

water treatment system

gas-circulation system

primary distribution system

power supply system

您能给我看看冷却水系统的图纸吗?

给水及饱和蒸汽系统

过热蒸汽系统

水处理系统

烟气循环系统

一次配电系统

供电系统

coal handling system

输煤系统

By what time can you finish installing this system?

你们什么时候能安装完这个系统?

Will you give me the quotation for installing the compressed air system as soon as possible?

你能把安装压缩空气系统的报价单给我吗?

The quotation you offered is too high. Can you lower it a little bit?

您所报的价格太高,您能降一点吗?

The drawings you gave me are not complete.

您给我的图纸不全。

I'll change a clear one for you.

我给你换一张清楚的。

There is something wrong with this drawing.

这张图纸上有问题。

I found it too. It has been corrected.

我也发现了,已经改正了。

This pipe was fitted higher. It exceeds the elevation specified in the drawing.

这条管道安装高了。它超过了图纸中规定的高度。

The elevation deviation is in the range of plus 5 mm to minus 5 mm.

标高偏差范围是 ± 5 mm。

It accords with the demands of the drawing specifications.

标高符合图纸规定的要求。

Let's have a look at the over-

让我们看一看厂址总体规划

<u>all plot plan of the site.</u>	图。
plant general layout	厂内总平面布置图
longitudinal layout of the main power building	主厂房纵向布置图
transversal layout of the main power building	主厂房横向布置图
You have delayed the submittal of the drawings for two months. It has seriously postponed the construction schedule.	贵方已迟了两个月交付图纸，这已严重地延迟了工期。

Boiler and Auxiliaries

锅炉及其附属设备

<u>Drum</u> is an important part of the boiler proper.	<u>汽包</u> 是锅炉本体的重要部分。
furnace	炉膛
water wall	水冷壁
burner	燃烧器
superheater	过热器
reheater	再热器
attemperator	减温器
economizer	省煤器
air preheater	空气预热器
electrostatic precipitator	静电除尘器
Look here, please. These are	请看，这是 <u>上升管</u> ，那是 <u>下降</u>