

海船船员适任考试

《轮机英语》

LUNJIYINGYU KEWENZHUSHI

张瑞申◎编著

课文注释

吉林大学出版社

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前言

大连海事大学出版社 2008 年 5 月第 1 版的中国海事服务中心组织编审的全国海船船员适任考试培训教材《轮机英语》的第一篇"专业阅读"中选取了大量英版原文作为课文,每课课文附有生词与短语表,部分难句还在注释中作了翻译。2008 年 11 月,大连海事大学出版社又出版了由党坤、宋永欣、郑庆功主编的"《轮机英语》译文及自学辅导"一书,对上述《轮机英语》教材中的阅读课文进行了全文翻译。

然而,船员适任考试培训教师在使用该《轮机英语》教材的过程中发现了以下几个问题:

1. 教材的生词表中某些单词列出了几个不同的中文词义,有时甚至列出了这个单词作为名词、形容词、动词时的全部词义,等于是代替学员查了词典,但学员往往仍然不知道课文中是用的哪个词义;

2. 学员对词语或句子理解不了时会去查阅译文,但由于某些句子较长、结构较复杂,看了译文仍搞不清楚哪个英文词语译成了哪个中文词语、原文的语法结构到底是怎么样的、为什么译成这样的中文等等;

3. 进行全文翻译的老师们付出了辛勤的劳动,可是有了译文之后,有些学员就离不开译文,看了译文以为自己理解了原文,下次碰到类似结构的英文仍然无法看懂。

鉴于这些问题,本书对课文中学习者可能尚未掌握的单词和短语编写了有针对性的英文或中文解释,对课文中容易发生理解错误的长句难句进行了结构分析,对典型的理解错误作了警示,有的地方还分析了发生错误的原因及提出了如何避免错误的建议,目的是帮助学习者通过学习课文真正提高英语阅读水平。编写原则如下:

1. 本书作为《轮机英语》教材的学习参考书,使用时必须伴随该教材,因此如果该教材的 Notes 和 New words and expressions 中对课文的

某个内容已有合适的翻译,或者在"《轮机英语》译文及自学辅导"一书中已有较易看出与原文对应关系的译文,本书就不再重复解释;

2. 对有多项语义的单词和词组,本书一般仅列出课文中所使用的语义;

3. 如果课文中某个单词或词组在本书中已作了解释,当此单词或词组在同一 Lesson 中再次出现并表示相同的语义时,本书就不再重列;但若在另一 Lesson 中再现则再次列出,以方便使用者;

4. 课文中的生词和词组宜以英文解释的就用英文,目的是帮助学习者更准确地理解语义并逐渐改掉必须译成汉语才能理解的不良习惯。

本书采用的缩写如下:

P. = Page (指教材 2008 年 5 月第一版的页码)

Para. = Paragraph (指教材每一页上自然段的顺序;段前若有标题,也算在该段之内)

sth. = something

sb. = somebody

由于本书编写者水平所限,错误在所难免,欢迎读者批评指正。意见可发 e-mail 至 zruishen@21cn.com 或 zruishen@126.com

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Unit 1 Main Propulsion Plant

Lesson 1 Ships and Machinery

P. 2, Para. 1

vehicle - a machine used for transportation

self-sustaining - keep oneself alive; keep oneself strong

The naval architect is concerned with the hull, its construction, form, habitability and ability to endure its environment. 造船工程师关注船体及其构造、形状、可居住性和环境耐受能力。

• be concerned with sth. - to be giving attention to sth.

• endure - to bear sth. difficult or unpleasant

specifically - more exactly

ship securing - securing a ship by attaching ropes to positions ashore or to a buoy or buoys, or by anchoring

overlap - the fact that two things or activities cover the same area in addition to their respective different areas

engineering services 技术应用设施

considerable - fairly great in quantity

P. 2, Para. 2

reasonably - using good judgement

assume 呈现出

varying - different

proportions - the size or shape of sth.

along 沿……分布

P. 2, Para. 3

Caution 本段中的 categories, classes, types 均指船舶的“种类”,作者把大的分类称作 category, 细分的类型称作 class 和 type. 这里不应把 class 理解为“船级”。

P. 3, Para. 1

combinations - sth. that combines several things

e. g. - for example

P. 3, Para. 2

rough - approximate

outline - a description of the main facts about sth.

in reality - in fact

multipurpose - that can be used in several different ways

just - only

P. 3, Table 1

unit cargo 件货

roll-on/roll-off (ship) 滚装船

cattle - large farm animals kept for their milk or meat; cows and
bulls

ferry 渡轮

cruise ship 邮轮

multi-purpose ship 各种用途的船舶

rock-dumper 砂石自动倾卸船

cable-layer 海底电缆敷设船

buoy-layer 航标敷设艇;浮筒施工船

oil-recovery vessel 残油收集驳船;清油船

shearleg crane 动臂起重架式浮吊

coast guard 海岸警卫队

yacht 游艇

various - many different (此处指杂类水上浮动设施)

submersible platform 可潜平台

pontoon 浮桥;浮码头

offshore material (handling equipment) 近海物资处理设施

drilling rig 钻井平台

jack up 桩脚式钻井平台

P. 3, Para. 3

loaded condition - a condition in which a ship is partially or fully loaded with cargo

arbitrary - based on chance rather than being planned 随机的

displacement - the mass of water displaced by a floating ship, measured in tonnes 排水量

mass 质量(物理学术语)

all told - all together; as a complete total

Displacement comprises the ship's light weight and its deadweight, where the deadweight is equal to the ship's loaded capacity, including bunkers and other supplies necessary for the ship's propulsion. 在此句中:

- comprise - consist of
- light weight 空载排水量
- deadweight - the difference between the displacement and the lightweight of a ship at any given draft
- where - in which (which 指上面这句话) (where 引导的定语从句一直到句末)
- loaded capacity - the weight a ship can carry, including that of cargo, bunkers and other supplies, at any given draft

P. 4, Para. 2

incidentally - by the way 顺便说一下

P. 4, Para. 3

The light weight of a ship is not normally used to indicate the size of a ship, whereas the deadweight tonnage (dwt), based on the ship's loading capacity, including fuel and lube oils etc, often is. 在此句中:

- whereas - but (引出一个一直到句末的并列分句)
- loading capacity - the weight a ship can carry, including that of cargo, bunkers and other supplies, at the maximum draft in specified cir-

cumstances (注意与上面的 loaded capacity 区分)

- deadweight tonnage - the difference between the displacement and the lightweight of a ship at the maximum draft in specified circumstances (注意与上面的 deadweight 区分)

- whereas 引出的第二分句的主干是 the deadweight tonnage often is (used to indicate the size of a ship). 括号内的词语因与第一分句相同而略去。

P. 4, Para. 4

merit - an advantage or good quality that sth. has

It is intended therefore only to describe the layouts from an engineering point of view. 在此句中:

- intend - to have as a plan or purpose
- It 是形式主语,后面的动词不定式短语是真正主语;
- point of view - a way of considering sth.

drive - a system that turns sth.

P. 4, Para. 5

regardless of - not being affected by

in the order of - approximately

P. 4, Para. 6

elevation drawing 垂直剖面图

uptake 烟喉,烟道汇集处

P. 4, Para. 7

power - to give power to

take-offs 输出轴

floor plate 地板,底板

against - very close to and touching

shell plating 船壳板

P. 5, Fig. 1-1

section 剖面图

P. 5, Para. 2

house - to give a place for; to contain

Lesson 2 How Does a Marine Diesel Engine Work

P. 7, Para. 2

a charge of 一次装填的, 一定量的

P. 7, Para. 3

第二行中 expend 应为 expand

in turn - as a result of sth. that is part of a connected series of events 从而, (本身)再

P. 7, Para. 4

a fixed sequence of events 顺序固定的一连串活动

be turned into - be changed into

P. 7, Fig. 2-1

Working principal of a diesel engine 应为 Working principle of a diesel engine

P. 8, Para. 3

a fine spray of 一股细雾状的(书中漏了介词 of)

P. 8, Para. 8

diagrammatically - using a diagram or diagrams

throughout - during the whole period of (time)

It is usual to draw such diagrams starting at TDC (firing), but the explanation will start at TDC (scavenge). 这样的图通常从上止点(发火)开始绘制,但解释将从上止点(扫气)开始。

P. 8, Para. 10

the vast majority of - almost every one of

at this point - at this particular moment

P. 9, Para. 1

To maximize this, balancing the reduced opening as the valve seats against the slight ram or inertia effect of the incoming charge, the inlet (suction) valve will normally be held open until about 25-35° ABDC (145-155° BTDC). 为使吸气量最大,综合考虑进气阀落座时开口减小

的情况和正在进入气缸的air的轻微惯性作用,通常会使进气(吸气)阀保持开启到下止点后大约 $25-35^{\circ}$ (上止点前 $145-155^{\circ}$) 才关闭。

- 句子主干是 the inlet (suction) valve will normally be held open
- until about $25-35^{\circ}$ ABDC ($145-155^{\circ}$ BTDC) 是时间状语
- to maximize this 是目的状语
- balancing the reduced opening as the valve seats against the slight ram or inertia effect of the incoming charge 是现在分词短语作插入语,对句子作补充说明。它接近于状语,但它的逻辑主语与句子的主语不一致。

Caution Balancing the reduced opening as the valve seats against the slight ram or inertia effect of the incoming charge 这个短语的结构容易被误解成现在分词 balancing 后面跟了两个并列的宾语:

(1) the reduced opening as the valve seats against the slight ram
or

(2) inertia effect of the incoming charge

这种理解把 the valve seats against the slight ram 看成“阀门向 the slight ram 落座”,但有以下几个破绽:

(1) 无法合理解释 slight ram 是什么。把它说成是“进气阀座”显然太牵强(见教材 p. 14, Expressions);

(2) 无法解释这两个宾语之间为何用 or 连接,难道只要“平衡”两者之一就行了吗?

(3) 无法解释为何 inertia effect 前面没有定冠词。

从这些破绽完全可以看出上述理解是站不住脚的。读者只要有足够的阅读经验,就不难看出 balance 与 against 是固定搭配: to balance M against N, 使 M 与 N 相平衡,解决 M 与 N 的矛盾。句中:

M = the reduced opening as the valve seats, 指“当气阀落座时开口减小这个情况”;

N = the slight ram or inertia effect of the incoming charge, 指“正在进入气缸的air的轻微惯性作用”,其中 the slight ram effect = the slight inertia effect.

请看例句:

You have to balance the advantages of living downtown against the disadvantages. 你必须权衡住在市中心的利弊。

The ecological effects of the factory need to be balanced against the employment it generates. 工厂对生态的影响需跟它所带来的就业一起被综合考虑。

Development has to be balanced against environmental concerns. 必须把发展和对环境的关注放在同等地位。

depending the type and speed of the engine 应为 depending on the type and speed of the engine

over - during

P. 9, Para. 2

At about 120-150° ATDC the exhaust valve opens (EVO), the timing being chosen to promote a very rapid blow-down of the cylinder gases to exhaust. 在此句中:

- the timing being chosen... (直到句末) 是分词独立结构, 作句子的补充说明;

- blow-down(初期)排气

as much energy as is practicable 尽可能多的能量

by BDC - not later than BDC

across the cylinder - from one side to the other side of the cylinder
a through flow of air to the exhaust 在此短语中:

- through - (adj.) passing from one end or side to another
- the exhaust - the exhaust valve

P. 9, Para. 4

invariably - always or almost always

The exhaust may be via ports adjacent to the air ports and controlled by the same piston (loop scavenge) or via poppet exhaust valves at the other end of the cylinder (uniflow scavenge). 排气可经由靠近进气口的排气口并由控制进气的同一个活塞来控制(回流扫气), 或经由气缸另

一侧的提升式排气阀(直流扫气)。

P. 10, Para. 1

Starting at TDC combustion is already under the way and the exhaust opens (EO) at $110-120^{\circ}$ ATDC to promote a rapid blow-down before the inlet opens (IO) about $20-30^{\circ}$ after ($130-150^{\circ}$ ATDC). 从止点开始,燃烧已在进行中,排气口在上止点后 $110-120^{\circ}$ 打开以促进在进气口开启前的快速的初期排气。进气口在排气口打开后约 $20-30^{\circ}$ (上止点后 $130-150^{\circ}$) 打开。

• under the way - in progress

detract from sth. - to make sth. become less

P. 10, Para. 2

此段与前一段相同。

P. 10, Para. 3

The exhaust should close before the inlet on the compression stroke to maximize the charge, but the geometry of the engine may prevent this if the two events are piston controlled. 在此句中:

• but 连接两个并列分句

• 第一个分句中, before the inlet 后省略了 closes

P. 10, Para. 4

at all events - in any case; whatever happens or has happened

the inlet ports will be closed as many degrees ABDC as opened before it. = the number of degrees ABDC when the inlet ports are closed is equal to that of degrees BBDC when they are opened. 进气口关闭时曲柄在下止点后的角度度数与进气口打开时曲柄在下止点前的角度度数相同。(句中 it 指 BDC)

i. e. again $130-150^{\circ}$ BTDC 也就是又一个 $130-150^{\circ}$ BTDC 处(上文中讲到,进气口在 $130-150^{\circ}$ ATDC 处打开)

P. 10, Para. 5

as with the four-stroke - like the four-stroke cycle, whose combustion also lasts $30-50^{\circ}$

Lesson 3 Diesel Engine Construction

P. 16, Para. 2

housing 轴瓦座

machine 用机械加工

P. 16, Para. 3

On the flat upper surface of the bedplate are arranged a number of A-shaped frames or entablatures which may be manufactured of cast iron or fabricated steel. 在此句中:

• 主语是 a number of A-shaped frames or entablatures... (一直到句末); 因主语长, 采用了倒装句

• are arranged 是谓语

• on the flat upper surface of the bedplate 是状语

• entablature 机架

• fabricated steel 组合式钢结构, 装配式钢结构

At the top of the A-frames there is a strong cast iron frame called the scavenging air box, which is built of a number sections provided with vertical flanges enabling them to be bolted together to form a block for 1 - 3 cylinders in front of the chain transmission, and a block with 4 - 6 cylinders aft of the chain transmission. 在此句中:

• a number 后少了介词 of

• enabling 后的 them 指 sections

• aft of the chain transmission - close to the chain transmission's end nearer to the ship's stern

P. 16, Para. 4

On top of scavenging air box is mounted strong cast iron frame for each cylinder. 在此句中:

• strong cast iron frame for each cylinder 是主语

• is mounted 是谓语

• on top of scavenging air box 是状语