

○ 依据国际民航组织英语标准编写
In Accordance With ICAO Standard

国际航线 飞行英语

Aviation English
for International Flight

Radiotelephony *Communication*

(Student's Book)

(学生用书·配光盘) 无线电通话



吴土星 / 主编

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四川出版集团·四川科学技术出版社

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序

语言影响飞行安全,这不是一个学术命题,而是血的教训。世界航空史上最惨烈的空难是由飞行机组与空管人员之间英语沟通的问题造成的(Tenerife 1977)。根据ICAO统计,全球各种飞行事故或事故征候的主要原因约有70%与通话不畅通有关。为此ICAO颁发了《ICAO语言熟练要求执行手册》(DOC9835/AN453)并在相关附件1、附件2、附件6、附件11等有关条款中要求从事国际飞行服务的飞行人员、管制人员要达到相应的英语通话标准。有关附件规定:2008年3月5日以后,全球与国际航空活动相关的民航飞行员和管制员必须达到规定的语言等级标准。同时在附件1“人员执照标准”中也规定飞行员和空中交通管制员,以及航空电台话务员等执照人员必须达到无线电通话语言能力要求,即必须达到ICAO英语等级4级以上标准,并对于低于6级的人员定期测试。

中国是一个崛起的大国,我国民航,正由民航大国向民航强国迈进。要实现这样一个量到质的转变,影响的因素很多,最重要的是人的因素。提高飞行人员的英语水平,从信息转换的技术环节上保证飞行安全,是一不可以回避的问题。民航总局十分重视我国飞行人员的英语提高问题,于20世纪90年代中期发起了英语工程,建立了有效的飞行人员英语培训与测试体系,并按照国际惯例,把飞行人员的英语考核结果纳入飞行执照管理。此举全面而有效地促进了我国民航飞行人员的整体英语水平的提升,受到了国际社会的称赞。不过,我们的飞行人员现有英语水平距ICAO出台的相关英语标准还有一定的距离。

如何缩短这个差异?民航总局已进行并采取了各种措施。由民航特聘专家吴土星教授主编的这套“国际航线飞行英语”丛书及时为飞行人员学习和培训提供了较好的材料。我与土星教授相识20年,他本是学英语出生,并无民航知识,可他毅力坚强,做学问犹如做人,不屈不挠,自学了飞行和空管的所有专业课程,还曾考取过管制员执照。他就像一个不会水的人,自己在岸边扑腾学游泳,一旦会游了,就向深水游去,激起朵朵浪花。他已出版了4部飞行和空管英语的教材和书籍,发表了20多篇论文,还是ICAO英语研究组的成员。这套教材的编写采用了语言学上的三P原则,即PRESENTATION(准备和陈述),PRACTICE(练习和学习),PRODUCE(巩固和掌握)。其实飞行英语的特征就是听和说,这种对症下药的编写路数正好对应了实际飞行的语言需要;在内容选用上尤其令人叫好。书中选择了过去20年全球空难和事故报告相关的

英语通话内容,这样不仅有助于帮助飞行员提高英语水平,还对他们今后飞行中应对相同或类似的情况提供了可行的语言支持。相信这套按照 ICAO 的具体语言要求和标准编写的丛书不仅对飞行员们学习和掌握航空英语有极大的帮助,同时供飞行员朋友们参加英语考试参考。

马涛

2006 年 5 月 8 日于北京

编写说明

为了帮助我国民航飞行人员提高英语水平并使之达到 ICAO(国际民航组织)相关英语标准,我们按照 ICAO 的具体语言要求和标准编写了这套“国际航线飞行英语”丛书。本套丛书包括 5 本既独立又相关的书,分别是:《无线电通话(学生用书)》、《无线电通话(教师用书)》、《听力训练》、《口语训练》和《核心进阶词汇》。

《无线电通话》是基于 ICAO 关于飞行人员英语熟练程度的合格要求编写的,编写时我们考虑了三 P 原则,即 Presentation 准备和陈述,Practice 练习和学习,Produce 巩固和掌握。本书结构合理,共 9 个单元,1 个练习总汇。每单元设两课,每一课有 4 个部分,Part I 含 Warm-up Activities,和 Vocabulary,是为 Presentation;Part II 是 Practice,共有 5 段对话和 1 篇听力材料;Part III Plain Language Learning 是设计的笔头练习 Part IV Interview 是设计的口语练习,第三和第四部分包括练习总汇是为 Produce。本书内容十分充实,在选材上我们充分考虑了飞行实际工作需要,同时结合 ICAO 的英语要求难度,选择了过去 20 年全球空难和事故报告里相关的英语通话内容,这样不仅有助于帮助飞行员提高英语水平,还对他们今后飞行中应对相同或近似的情况提供了可行的语言支持。为了使飞行员们在学习时有较好的练习线索,我们在书中设计了 Interview 的练习形式。在这个模拟通话练习中,我们向学习者提供必须的航行资料和空管信息,只要两人就可以对练。通过这个练习,飞行员们还可以熟悉口语考试的形式。

ICAO 对飞行人员的英语要求是结合工作实际而提出来的,其中,听力是重要部分。《听力训练》的编写把 ICAO 要求与飞行实际密切结合起来。本书共 5 个部分。第一部分是 ICAO 相关英语标准的英语介绍,第二部分是听力技巧介绍和听力考试实践技巧介绍,第三部分是 15 套听力测试练习,第四部分是测试练习的答案和难题详解,第五部分是测试练习的录音原文。

英语口语教材编写一直是比较困难的,其主要难点在于设计口语练习的场景,尤其难于设计模拟对话。《口语训练》克服了这些困难。本书完全按照飞行实际工作条件而设计,全书有 5 个单元,共 10 课。每课含 Warm-up Activities, Read Aloud, Read-back Drills, Communicating With ATC: Normal Procedure, Communicating With ATC: Abnormal Procedure, Narration Practice, Interview And Aviation Humors。本书的主线是模拟正常和非正常条件以及飞行中的特情,每一课中设计的 Interview 是模拟的飞行英语测试口语部分;为了活跃口语练习,增加学习乐趣,我们在 Warm-up Activity 里特意编排

了一首与飞行为主题的英文诗歌并在每课编进了 Aviation Humors。本书最后是 Plain Language Practice, 为飞行员提供日常英语练习的学习材料。

《核心进阶词汇》一书是在我们正在开发的民航英语语料库基础之上编撰的。本书 5,000 飞行英语词汇是从 200 万民航英语语料库中筛选出来的。本书按字母顺序编排, 对重要词汇标出该词汇的出现频率, 对所有词汇进行日常英语和民航尤其是飞行专业英语释义。本书的词汇涵盖 ICAO 英语标准对词汇的要求。

吴土星

2006 年 5 月于中国民航飞行学院

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UNIT ONE GROUND PREPARATION

Lesson 1 Maintenance Check

● Part I Warm-up Activities

1.1 Listening Activities

1.1.1 Directions: Listen to the statements and fill in the missing words in the blanks.

1. The trained flight crew use _____ to insure the airplane condition is acceptable for flight.

2. The pilots should prepare for _____ during takeoffs

3. When emergency occurs in flight, there is _____ the proper action to be taken.

4. You must have an established plan of action and _____ your aircraft before an actual incident occurs.

5. Most power losses occur _____ or reduction of power.

1.1.2 Directions: Listen to the passage and fill in the missing words in the blanks.

Maintenance check is one of the most important pre-flight activities. Aircraft maintenance engineers _____ by aviation authorities are trained to check and _____ airframes, engines and systems.

To _____ the flight crew of the safety of the aircraft that they are going to fly, the maintenance engineers will inspect each part of an aircraft according to the manufacturers' maintenance _____ and service bulletins. Different types and degrees of inspection are required at _____ and routine _____ of individual



items is based on the number of landings, flying hours and other criteria.

The captain should check the maintenance log before departure, ensure a _____ maintenance _____ is in force, and be satisfied that any defects carried in the log are satisfactory for the flight.

The minimum equipment list will give guidance as to whether a defect is allowable. If you are not sure, _____ with the engineer is a good way of picking up any concerns or background information. When you look at the log, you should also note any cabin defects and pass them on to flight crew and the senior cabin crews.

1.2 Oral Activities

Directions : Listen to the passage and then answer the questions.

Key words: seat, wear, in a position..., safety harness..., seat belts, fasten, discomfort, strap, full harness, turbulence

1.3 Vocabulary

inspection	n. 检查
gust locks	阵风锁
wheel skirt	轮子边缘
engine coolers	发动机冷却器
bird nests	鸟巢
frost	n. 霜
fuel capacity	燃油容量
consumption rate	消耗率
endurance	n. 续航油量, 持续能力
notices to airmen	航行通告
reserve	n. v. 储存
review	n. v. 复习, 检查
valid	adj. 有效的
release	n. v. 放行释放
nick	n. 裂口凹槽
dent	n. 凹部凹痕
blade	n. 叶片
port	n. 港口, 舱门, 左舷
rock	n. 石子
scratch	n. 痕
over-speed	n. 超速
leakage	n. 漏, 泄漏, 渗漏



the landing gear bay	起落架轮舱
hydraulic fluid	液压油
an auxiliary hydraulic pump	辅助液压泵
actuating cylinder	作动筒
O-ring hydraulic line joint	O 形液压管路联结器
crack	v. n 碎裂断裂
wrench	n. 扳手扳钳
gasket	n. 垫圈
shoulder harness	肩带
tight	adj. adv. 紧
adjust	v. 调整
spare part	零部件
postpone	vt. vi. 推迟
fix	v. 固定
rivet	n. 铆钉
longeron	n. 纵梁, 机翼大梁
wing root	翼根
fillet	n. 嵌条
wear	v. 磨损
attach to	v. 连接...至
replace	v. 更换
screw driver	改锥
short	n. 短路
wiring	n. 电路
circuit breaker	跳开关
fuse	n. 保险丝
popped out	vt. 跳出
illuminate	vt. 点亮
bolt	n. 螺栓
bulb	n. 灯泡

● Part II Practice

2.1 Listening Practice One

Directions: There are two exchanges in Practice One. Listen to the exchanges and fill in the blanks.



Exchange One :Dent on the Blade of an Engine

PIL: Sir, will you please come here to have a look?

M: Yes.

PIL: There is _____ on the blade of No 3 port engine. I suppose a rock hit it.

M: That is a serious problem. A lot of forces are _____ the blade when the engines are running. A _____ can quickly develop into a serious engine failure.

PIL: I know about the danger of _____.

M: Yes. We know these can cause failures, so we must carefully _____ them. Fortunately all the other blades are _____.

PIL: By the way, when I _____ the power, N1 has a bit _____.

M: Do you have any _____ while controlling the aircraft?

PIL: A little bit.

M: We are going to give it a _____.

PIL: Thank you, Sir.

Exchange Two

PIL: I smelled _____ somewhere near the _____. I haven't found any leakage there.

M: Let me put an _____ on the system and sort it out.

PIL: Good, that will be easier to find the leakage.

M: There is no problem for the actuating _____. Maybe, a worn _____ is allowing a leak.

PIL: Take a close look at it, sir.

M: Ah, here is your leak. This hydraulic line _____ developed a leak.

PIL: It must be _____. You will have a hard time.

M: No, I don't think so, joints are _____. I'll tighten them with a _____.

PIL: I bet the _____ must be replaced.

M: You are right. I'll replace it with a new one.

(Ten minutes later.)

M: Turn the auxiliary hydraulic pump on again. We'll check it. OK, they are fixed.

PIL: Thank you.

2.2 Listening Practice Two

Directions: There are two exchanges in Listening Practice Two. Listen to the following



exchanges and fill in the missing information

Exchange One: A chair in the Cabin is Broken

PIL: Excuse me, please come here to the cockpit.

M: What can I do for you?

PIL: It seems that the _____ in the cockpit is damaged.

M: Can you give me more details, please?

PIL: The first officer can't move his chair or raise his chair either.

M: How about the safety belts and _____?

PIL: They are working properly. Forget them, the only problem is the chair.

M: I see. Let me have a closer look. Oh, yes, the control lever is tight too hard. No one could move it.

PIL: The first officer must adjust the seat position properly to obtain the _____.

M: You are right, but we have no _____ here. What can I do?

PIL: I'll inform our company of the situation. Perhaps the flight _____.

M: It is hard to say. Just depends. We will try to fix it as soon as possible.

PIL: It all depends on you, right?

M: I will try my best.

Exchange Two: Loose Rivet

(After walking around the aircraft)

M: Captain, have you noticed any problems with the aircraft?

PIL: Come here. Look, some of the rivets at the wing root have been _____ from the bulkhead. You can move the skin there. It should be tight.

M: Let me have a look. Yes, it is _____. I'll look at the _____ after the main spar.

PIL: Oh, there are another two loose rivets near the fillet.

They are likely to _____ and can't attach to the longerons.

M: I am going to replace these rivets. Hand me the screw driver, please.

PIL: _____ all the rivets before we fly the aircraft.

M: Don't worry. I'll fix them all in a few minutes. The aircraft _____ when it flies again.

PIL: I am so glad to hear that.

2.3 Listening Practice Three

Directions: There are five exchanges in Listening Practice Three. Listen to the following exchanges and fill in the table:



No.	Full Callsign	Position	Wind Data
1			
2			
3			
4			
5			

2.4 Listening and Speaking Practice

Directions: There is one passage in this part. Listen to the passage and answer the questions.

Questions:

1. According to the passage, what is a main cause of aircraft accidents?

2. What should you do for fuel inspection before flight?

3. Cite at least five items to be checked during pre-flight preparation.

● Part III Plain Language Learning

3.1 Sentence Making

Directions: There are three groups of words or phrases in this part. Make sentences which should include all the words or phrases provided.

1. inspection, blade, port, scratch
2. fuel capacity, consumption rate, reserve, review
3. leakage, the landing gear bay, hydraulic fluid, exam

3.2 Passage Building

Directions: There are two groups of words or phrases in this part. Make passages which should include all the words or phrases provided.

1. maintenance check, activities, maintenance engineers, the maintenance log, items, defect
2. safety, carelessly, cause, systems, however, be sure, consider, capacity, minimum

3.3 Translate the Following Sentences from Chinese into English

1. 由于浓雾能见度变坏。



2. 滑行道很滑, 滑行时要小心。
3. 由于发动机短舱附近漏油, 有一架飞机正返回北边的停机位。
4. 港龙 235 我们的第二部高频收发机故障, 请通知维修人员在我们到达时检查一下。
5. 香港管制, 如果你们有备用器材, 我们想换一部, 这样可缩短过站停留时间, 否则, 由于起飞时限关系, 我们将过夜。

3.4 Translate the Following Sentences from English into Chinese

1. CCA981, No 1 engine fire. We have completed emergency procedure checklist, warning light remains illuminated, request landing immediately.
2. UAL569, your departure time has to be delayed due an aircraft lower cargo on fire on the runway.
3. Hong Kong Ground, CSN308, radio check 124.65. How do you read?
4. This is your captain speaking, I am sorry to inform you that due to flow control, we will delay in about one hour. Please remain in your seats and wait.
5. Takeoff aborted due to number one engine failure. We've managed to stop on the overrun.

●Part IV INTERVIEW

Simulate an interview with your partner using the given information.

Candidate is a pilot of ABCDE, who is in the airplane on the apron of the airport.

You are the maintenance engineer.

Section One

Phase 1

The candidate:

Having a walk around check.

Find a minor hydraulic leakage near the main landing gear bay.

Prepare the maintenance engineer message:

Having a close exam.

Nothing is wrong with cylinder

Phase 2

The candidate:

Go back to the cockpit to check the hydraulic pressure.

The candidate found hydraulic pressure is abnormal and brake is poor.

Prepare the maintenance engineer message: