

Basic Maritime English

(第三册)

主编 张红丽 刘丽娜

基础海事英语阅读



大连海事大学出版社

基础海事英语阅读

Basic Maritime English

(第三册)

主 编 张红丽 刘丽娜

副主编 刘 蓓 高 嵩

编 者 (以姓氏笔画为序)

于文娟 王 鹏 王 春 刘肖沛

朱彦之 孟祥宇 林 红 姜 泉

高玉美

大连海事大学出版社

© 张红丽,刘丽娜 2006

内容提要

本书是《基础海事英语阅读》教材中的第三册。内容丰富,选材新颖,图文并茂。本书共 12 个单元,每单元分三大模块:课文、综合练习和阅读材料。内容选材突出远洋船员工作性质的科普知识,包括:海上安全、天气、航海出版物、船舶保养与维修、港口国检查与控制、航海日志、海商法、海上医护、物流管理、轮机系统知识、海上通信、电子海图等内容。

图书在版编目(CIP)数据

基础海事英语阅读. 第3册 = Basic Maritime English / 张红丽,刘丽娜
主编. —大连:大连海事大学出版社, 2006. 9
ISBN 7-5632-1990-0

I. 基… II. ①张… ②刘… III. 海上运输—英语—阅读教学—高等学校—教学参考资料 IV. H319.4

中国版本图书馆 CIP 数据核字(2006)第 103799 号

大连海事大学出版社出版

地址:大连市凌海路 1 号 邮编:116026 电话:0411-84728394 传真:0411-84727996

<http://www.dmupress.com> E-mail: cbs@dmupress.com

大连理工印刷有限公司印装 大连海事大学出版社发行

2006 年 8 月第 1 版 2006 年 8 月第 1 次印刷

幅面尺寸:185 mm × 260 mm 印张:8.5

字数:209 千字 印数:1 ~ 3000 册

责任编辑:史洪源 版式设计:海 韵

封面设计:王 艳 责任校对:风 韵

定价:12.00 元

前 言

海事英语是一门非常专业的英语,仅一门驾驶专业英语就涉及几乎航海业务的各个方面:从天文、地文、气象,到海上船舶操纵、驾驶值班;从 VHF、电报通信,到海上安全、救助;从船体结构部位,到装卸设备部件;从货物的配载、装卸,到货运的各种契约、文件;从港口规章、指南,到 IMO 国际规则、公约。海事英语语言文字大都是十分规范的国际文本,其语言的广度和深度,不亚于其他任何一门专业英语,语言学习的起点高、难度很大。因此,一旦从风花雪月般的《大学英语》进入涵盖远洋业务的专业英语,即使基础英语较好的学生也一时无法适应,难以接受。我们认为:作为航海院校的学生,应该从一开始就从海事英语的基础知识入手,尽量多地接触专业英语知识,在航海英语中学习和掌握英语。

为此目的,经过多年的探索与实践,我们组织编写了这套《基础海事英语阅读》。该书内容涉及广泛、图文并茂;语言简明实用、循序渐进。其使用对象是国内航海院校海上和陆上专业的学生,既可用作精读、泛读,也可作为口语教材使用。全书共三册,每册各有重点,既有理论,又有实践,语言通俗易懂,趣味性强。本套书最大的特点是:在新生入校学习阶段,就能在学习中初步了解专业知识,待正式进入专业英语学习阶段,便解决了专业词汇生疏和相关知识不懂的问题。

本书为第三册。全书共 12 个单元,每单元分三大模块:课文、综合练习和阅读材料。内容包括:海上安全、天气、航海出版物、船舶保养与维修、港口国检查与控制、航海日志、海商法、海上医护、物流管理、轮机系统知识、海上通信、电子海图等。张红丽编写 1 单元;于文娟编写 2 单元;朱彦之编写 3 单元;王春编写 4 单元;刘丽娜编写 5 单元;高嵩编写 6 单元;高玉美编写 7 单元;林红编写 8 单元;王鹏编写 9 单元;刘蓓编写 10 单元;姜泉编写 11 单元;孟祥宇编写 12 单元。

在本书的编写过程中,得到了王平洲老师和加拿大籍专家 Gerrit 的指导及中远集团、青岛远洋船员学院、各大远洋公司、大连海事大学出版社的大力支持和帮助,谨在此一并感谢。

本书也适合于远洋船员的英语进修和自学。对从事国际航运、物流管理和相关专业的学生,也是一本很好的专业英语参考书。

本书虽已经过多次修改校对,但由于时间紧迫,编写水平有限,书中错误在所难免。希望广大读者谅解并提出宝贵意见,以便再版时改正。

编 者

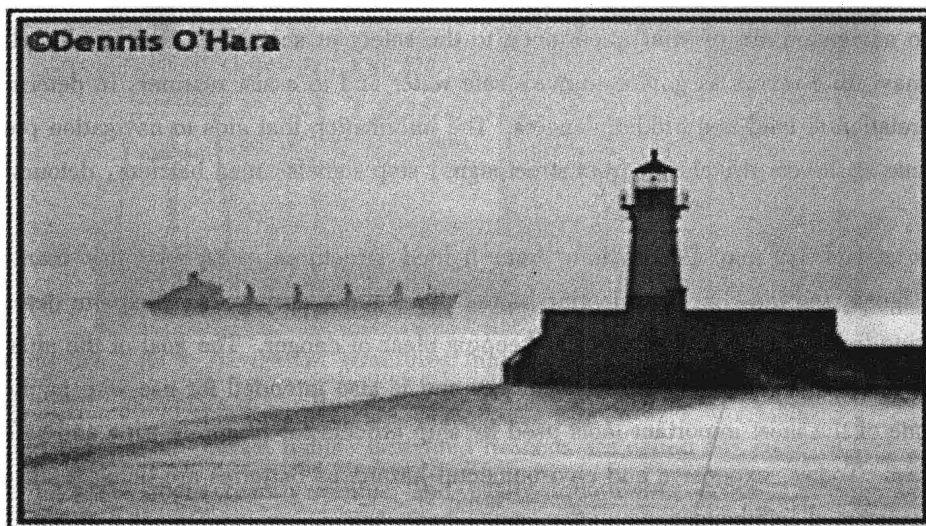
2006 年 8 月

CONTENTS

Unit One	Safety at Sea	(1)
Text	Safety at Sea	(2)
Study & Practice		(8)
Unit Two	Weather	(15)
Text	Clouds and Weather	(15)
Study & Practice		(19)
Unit Three	Nautical Publications	(24)
Text	Nautical Publications	(24)
Study & Practice		(28)
Unit Four	Maintenance on Board	(34)
Text	Maintenance on Board	(34)
Study & Practice		(38)
Unit Five	Port State Control Inspection	(46)
Text	The Introduction of PSC	(46)
Study & Practice		(50)
Unit Six	Deck Logbook	(55)
Text	Deck Logbook	(56)
Study & Practice		(59)
Unit Seven	Maritime Law	(65)
Text	Maritime Law	(65)
Study & Practice		(69)
Unit Eight	Medical Advice by Radio	(75)
Text	Medical Advice by Radio	(76)
Study & Practice		(79)
Unit Nine	Logistics Management	(85)
Text	An Introduction to Logistics Management	(86)
Study & Practice		(89)
Unit Ten	Marine Engineering Systems	(95)
Text	Marine Engineering Systems	(96)
Study & Practice		(99)
Unit Eleven	Navigation and Communication	(105)
Text	Navigation and Communication	(106)
Study & Practice		(109)

Unit Twelve	Electronic Chart Display and Information System (ECDIS)	(115)
Text	Electronic Chart Display and Information System (ECDIS)	(116)
Study & Practice		(120)
Glossary		(124)

Unit One Safety at Sea



Pre-reading Discussion

Think about the following questions, choose one of them to discuss with your partner, and then give a representation to the class.

1. What dangers might a ship meet with when she sails at sea?
2. What have people done to protect the ships?
3. What do aids to navigation include?
4. How many kinds of buoys do you know? What are they used for?
5. What are beacons and lighthouses used for?
6. Can you say something about the Plimsoll line?
7. Why is the Plimsoll line drawn on the hull of a ship?
8. If a ship is in distress or in need of assistance for persons on board which is the most effective means for search and rescue?

Preface

Sailing at sea, you might encounter dangers such as storms, rough seas, rocks, fogs, icebergs, or sandbanks, etc. So to ensure the safety of navigation, people have made many inventions to protect themselves. As a mariner, you have to bear in mind the safety measures, never forgetting that the safety of your life is the most important.

Text Safety at Sea

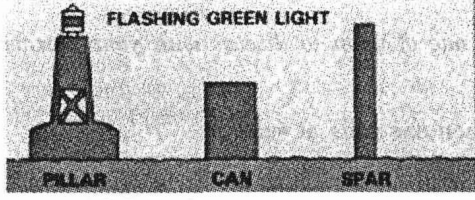
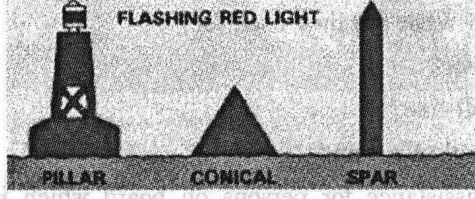
From earliest times, ships at sea have been faced with certain dangers. Gales and rough seas can make a ship sink. She may hit rocks or an iceberg and break in two. Fog is always as dangerous as sandbanks. During the years, there have been many inventions to protect ships.

Aids to Navigation

Aids to navigation are of vital importance to the safety at sea. They are usually placed along coasts and navigable waters as guides to mark safe water and to assist mariners in determining their position in relation to land and hidden dangers. The information that aids to navigation provide is almost the same as the car drivers get from street signs, stop signals, road barriers, detours and traffic lights.

Aids to navigation may be anything from lighted structures, beacons, day markers, range lights, fog signals and landmarks to floating buoys. Each has a purpose and helps in determining location, getting from one place to another or keeping clear of danger. The goal of the aids to navigation is to promote safe navigation on the waterway and is also intended for use with nautical charts, which are one of the most important tools used by ship officers for planning trips and safely navigating waterways. Today, expensive and environmental-hazardous batteries are being replaced by solar power and automated lighthouses.

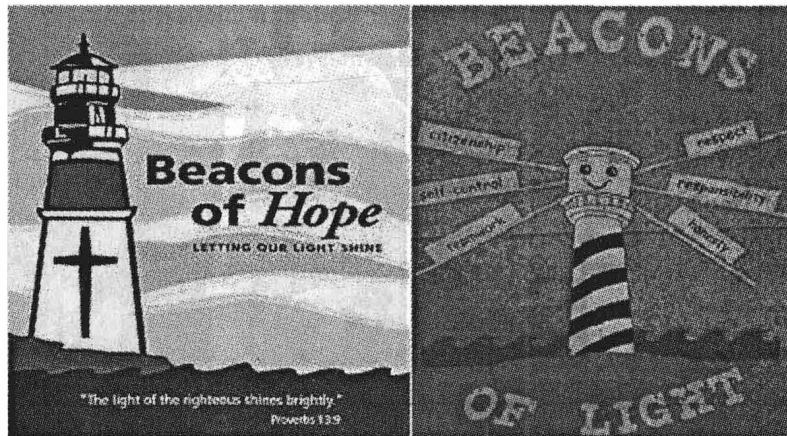
Buoys

	<p>Keep all solid green buoys on your port (left) side when moving in the upstream direction.</p>
	<p>Keep all solid red buoys on your starboard (right) side when moving in an upstream direction.</p>

Buoys are floating, anchored, unmanned device in the water, made in different colours and shapes according to the warning they are giving. They may be a nun, spar, can, lighted, bell, whistle or other buoy. A nun buoy is conically shaped, anchored to the right of a channel when entering from sea and painted red, while a can buoy is a cylindrical, flat-topped, navigational buoy, usually painted black. It carries odd number and is left to port when entering a harbour or a channel from seaward. So buoys are used in channels, estuaries and along the coast to mark a navigable channel or, positions of shoals, wrecks or other obstructions, or limits of fishing grounds, prohibited

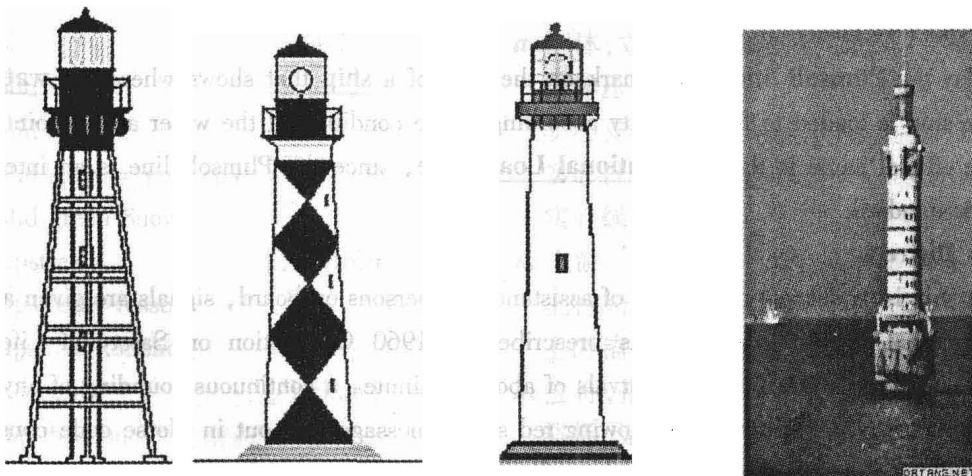
or mine sweeping areas. Many buoys have flashing lights and bells on them so that they can be seen and heard at night. Mariners must NOT rely on buoys alone for determining their position, for storms and wave action can cause buoys to move.

Beacons



Beacons are aids to navigation structures that are permanently fixed to the earth's surface. They range from lighthouses to small, single-pile structures and may be located on land or in the water. Lighted beacons are called lights; unlighted beacons are called day beacons. Beacons exhibit a day mark to make them readily visible and easily identifiable against background conditions. Generally, the day mark conveys to the mariners, during daylight hours, the same significance as does the aid's light or reflector at night.

Lighthouses



Lighthouses differ in size, shape, characteristics and visibility. They are ATONs (aids to navigation) and provide safety and positioning information to the mariner. Primary seacoast lights can be seen from far offshore. When entering a port, the mariners can see it long before any of the smaller aids to navigation. The markings on a lighthouse allow them to be identified in the daylight hours. A lighthouse usually has a large rotating light inside with a light on top—red, green, or white. This light on top can be steady or flash in a variety of patterns. This helps the mariners identify which light he

sees. Lights may also have several white or red sections showing you safe and unsafe areas.

The Plimsoll Line

The Plimsoll line

TF—Tropical Fresh Water

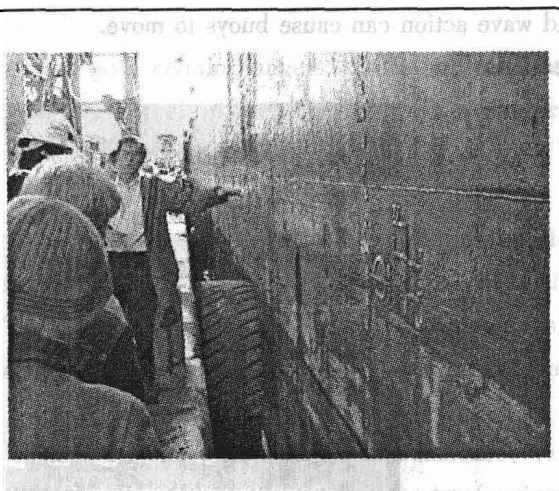
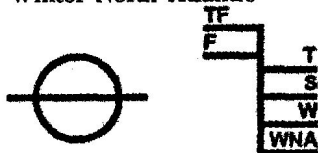
F—Fresh Water

T—Tropical Sea Water

S—Summer Sea Water

W—Winter Sea Water

WNA—Winter North Atlantic



A ship can sink if it is overloaded. The more heavily a ship is loaded, the lower down in the water it falls. A low ship can easily let in water in rough seas and then sink.

In the 19th century, an engineer called **Samuel Plimsoll** developed the idea that load lines should be painted on the plating amidships to indicate the ship's permissible (or maximum) draft according to international agreement, to which a ship may be loaded in different ocean areas at different seasons. By international agreement, each country's classification society establishes the levels. Starting with the lowest line, Winter North Atlantic (WNA), there are six ending with Tropical Fresh Water (TF).

Today the **Plimsoll line** is the mark on the hull of a ship that shows where the waterline is when the ship is loaded to full capacity according to the condition of the water at the point of loading. The official name is the International Load Line, since the Plimsoll line is an international load limit standard.

Ships in Distress

If a ship is in distress or in need of assistance for persons on board, signals are given according to International Conventions. Signals prescribed in 1960 Convention on Safety of Life at Sea (SOLAS) include: a gun fired at intervals of about a minute, a continuous sounding of any fog signaling apparatus, rockets or shells showing red stars, message sent out in Morse code consisting of the group (i. e. the SOS signal) either by radiotelegraphy or by any other signaling method, international code signal of distress indicated by N. C., flames as from a burning barrel of oil, flying a square flag having above or below it a ball or anything resembling a ball, smoke signal giving off orange-coloured smoke, signal by radiotelephony consisting of spoken word "Mayday", etc.

Revised regulations of SOLAS in 1992 introduced the Global Maritime Distress and Safety System (GMDSS), which became mandatory starting from February 1, 1999. GMDSS applies to commercial vessels of 300 Gross Registered Tons (GRT) and above, engaged on international voyage

subject to the SOLAS. The basic concept of the GMDSS is that search and rescue authorities ashore, as well as shipping in the immediate vicinity of the ship in distress, will be rapidly alerted to a distress incident so they can assist in a co-ordinate search and rescue operation with the minimum delay.

In a search and rescue operation, a lifeboat usually tries to get to the ship in distress if it is not too far from the shore. Otherwise, a nearby ship may come to the rescue. Sometimes aircrafts or helicopters are required to search for survivors.

Words & Expressions

1. face	[feis]	<i>v.</i> 面对
be faced with		面对
2. rough	[rʌf]	<i>a.</i> 狂暴的, 狂风暴雨的; 粗鲁的, 粗糙的
3. iceberg	['aɪsbəɡ]	<i>n.</i> 冰山
4. sandbank	['sændbæŋk]	<i>n.</i> 沙洲
5. aid	[eid]	<i>vt., n.</i> 援助, 帮助
first aid		急救
aids to navigation		航标
6. vital	['vaɪtl]	<i>a.</i> 极其重要的, 有生命力的
7. navigable	['nævɪɡəbl]	<i>a.</i> 可航行的, 可驾驶的
navigable waters		通航水域
8. detour	['di:tʊə(r)]	<i>n.</i> 弯路
9. solid	['sɒlɪd]	<i>a.</i> 固体, 立体; 坚固的
solid ballast		固体压载
solid pillar		实心支柱
solid spar = pole spar		实心杆
solid green buoy		实心绿色浮标
10. upstream	[ʌp'stri:m]	<i>n.</i> 上游
upstream vessel		上行船, 逆行船
upstream anchor		上游锚(在上游方向的锚)
11. beacon	['bi:kən]	<i>n.</i> 立标, 指向标
day beacon		昼标, 无灯航标(只供白天使用)
night beacon = light beacon		灯标, 有灯立标
12. marker	['mɑ:kə]	<i>n.</i> 标志, 标时器
13. range	[reɪndʒ]	<i>n.</i> 叠标, 范围, 航程
range lights		叠标灯
range beacon		(导航)叠标
14. buoy	[bɔɪ]	<i>n.</i> 浮标, 浮筒
15. keep clear of ...		不要靠近..., 避开...

16. nun	[nʌn]	<i>n.</i> 纺锤形浮标(水上部分为锥形)
17. spar	[spɑ:]	<i>n.</i> 杆,柱;杆状(浮标)
18. can	[kæn]	<i>n.</i> 罐状(浮筒)
19. whistle	[(h)wisl]	<i>n.</i> 汽笛,口哨
20. conical	['kɒnikəl]	<i>a.</i> 圆锥形的
21. cylindrical	[si'lindrik(ə)l]	<i>a.</i> 圆柱体的,圆桶形的
22. odd	[ɒd]	<i>a.</i> 奇数的
23. estuary	['estjuəri]	<i>n.</i> 港湾,河口湾,三角湾
24. shoal	[ʃəʊl]	<i>n.</i> 浅滩,暗礁
25. wreck	[rek]	<i>n.</i> 沉船或飞机残骸
26. obstruction	[əb'strʌkʃən]	<i>n.</i> 障碍物
27. minesweep	['main,swi:p]	<i>v.</i> 扫雷
28. exhibit	[ig'zibit]	<i>v.</i> 显示,展出
29. convey	[kən'vei]	<i>vt.</i> 运输,传递
30. offshore	['ɔ:(r)fɔ:]	<i>a.</i> 近海的
31. rotate	[rəu'teit]	<i>v.</i> 旋转
rotating light		旋转灯光
32. Samuel Plimsoll	['sæmjʊəlp'lɪmsəl]	塞缪尔·普利姆索尔
Plimsoll line		载货吃水线
33. plating	['pleitiŋ]	<i>n.</i> 船壳板
34. permissible	[pə(:)'misəbl]	<i>a.</i> 可允许的
35. classification	[,klæsifi'keɪʃən]	<i>n.</i> 分类,级
classification society		船级社
36. tropical	['trɒpɪkl]	<i>a.</i> 热带的
tropical storm		热带风暴
tropical cyclone		热带气旋
37. distress	[dis'tres]	<i>n.</i> 遇难
in distress		遇难
38. interval	['intəvəl]	<i>n.</i> (时间的)间隔
at intervals (of)		不时,间隔一定的时间
39. apparatus	[,æpə'reɪtəs]	<i>n.</i> 仪器,设备
40. Morse Code	['mɔ:s'kəʊd]	<i>n.</i> 莫尔斯码(通信符号)
41. resemble	[ri'zembl]	<i>vt.</i> 类似,像
42. mayday	['meɪdeɪ]	<i>n.</i> (无线电话)呼救信号
43. mandatory	['mændətəri]	<i>a.</i> 强制性的 = mandatory

Notes

1. From earliest times, ships at sea have been faced with certain dangers.

从古至今,海上行船一直面临某些危险。

1) “be faced with”面临,如:

We are faced with immediate danger.

They were faced with exceptionally difficult situation.

他们面临极其困难的局面。

2) certain dangers 指 gales, rough seas, rocks, icebergs, sandbanks

2. It may hit rocks or an iceberg and break in two.

它可能触礁或撞上冰山,而裂成两半。

hit 等于 strike 或 collide with

3. Fog is always as dangerous as sandbanks.

雾总是危险的,其危险程度并不亚于沙洲。

4. let in water 等于 let water in

同样:“Let go port anchor.” 就等于“Let port anchor go.”

5. Buoys are floating, anchored, unmanned device in the water, made in different colours and shapes according to the warning they are giving.

浮标是锚泊在水中、无人操作的浮动装置,按照它们发的不同警告制成不同的颜色和形状。

floating, anchored, unmanned 都是 device 的定语。

注意:float 无过去分词形式,因为它是不及物动词。

6. ... developed the idea that load lines should be painted on the plating amidships to indicate the ship's permissible (or maximum) draft according to international agreement, to which a ship may be loaded in different ocean areas at different seasons.

发明了一个办法:在船中部的外壳板上绘画载重线,标出国际协议所允许的最大吃水线,船只在不同的季节,于不同的海域只可装货到这一吃水线。

that 从句是 idea 的同位语。注意:这种从句只能用 that 引起。如:The accident was caused owing to the fact that the stevedores operated the derrick roughly.

7. signals prescribed in 1960 Convention on Safety of Life at Sea include:

1960 年国际海上人命安全公约规定的信号包括:

注意下面包括的内容中,动词的用法,如:

fire a gun

鸣放信号枪

fire rockets

发射火箭

sound fog-signalling apparatus

拉响雾号装置

send out messages in Morse code

用莫尔斯码拍发电报

burn flames

点火焰

fly a square flag

挂起方形旗

give off orange-coloured smoke

释放橙色烟雾

8. “Samuel Plimsoll” (February 10, 1824 - June 3, 1898) was a British politician and social reformer, now best remembered for having devised the Plimsoll line. He was born at Bristol. The Plimsoll line (also Plimsoll Mark) was named after Samuel Plimsoll. The line is

marked on the ship's side to show how far it may legally go down in the water when loaded.
船的载货吃水线。

Study & Practice

I) Read aloud the following paragraph

Aids to navigation may be anything from lighted structures, beacons, day markers, range lights, fog signals and landmarks to floating buoys. Each has a purpose and helps in determining location, getting from one place to another or keeping clear of danger. The goal of the aids to navigation is to promote safe navigation on the waterway and is also intended for use with nautical charts, which are one of the most important tools used by ship officers for planning trips and safely navigating waterways. Today, expensive and environmental-hazardous batteries are being replaced by solar power and automated lighthouses.

II) Comprehension of the text

1 Answer the following questions:

- 1) What is the function of the aids to navigation?
- 2) Can you describe the different types of buoys, beacons and lighthouses so far as you know?
- 3) Who developed the Plimsoll Line? What is it used for?
- 4) How many signals are described in SOLAS according to the passage?
- 5) What kind of assistance should be given to a ship in distress?

2 Choose the best answer for each of the following:

- 1) From the earliest times _____ have been dangers to ships at sea.
A. fog and rough seas B. sea animals
C. icebergs and sandbanks D. gales and storms
- 2) Aids to navigation are used to _____.
A. direct the ships in and out of the port.
B. mark safe water and assist mariners in determining their position
C. prevent all ships from collision
D. locate the ships on the surface of the waters
- 3) A can buoy _____.
A. is of cylindrical shape with a flat top
B. is usually painted black
C. carries odd number
D. is left to starboard when entering a harbour from seaward
- 4) Buoys _____.
A. are fixed rigidly to the seabed
B. have flashing lights on some of them
C. are painted in different colours and made in different shapes
D. are used to mark shallow waters or wrecks.

- 5) The Plimsoll line _____.
A. tells us the limit the ship can sink to
B. is only one horizontal line on the hull of the ship
C. helps prevent the ship from sinking owing to overloading
D. is centrepunched(中间打印) on the hull of all ships
- 6) Ships in distress _____.
A. sometimes fire a gun or rockets showing red stars
B. sometimes send out radio message in Morse code for help
C. fly a red B flag for assistance
D. sometimes sound fog horns to show that they require help

3 Match the following information:

- | | |
|-------------------------|---|
| 1) The Plimsoll line is | A) usually conically shaped, painted red |
| 2) A beacon is | B) usually flat-topped, painted green |
| 3) A can buoy is | C) light fixed on rocks or on the coast to warn or guide ships |
| 4) A nun buoy is | D) Loadlines that indicate the maximum draft to which a ship may be safely loaded |
| 5) Port hand buoys | E) of conical shape anchored to are the right of a channel when entering from sea, painted red |
| 6) Starboard hand | F) of cylindrical shape, anchored to the buoys are left of a channel when entering from seaward, which are painted black or green |

III) Translation

1 Translate the following into English:

- 1) 为了使船只免遭危险,人们自古以来做出许多发明。
- 2) 在船体上画一条水平线标志船舶安全装货的最大吃水,这一办法是 19 世纪由一个名叫 Samuel Plimsoll 的工程师想出来的。
- 3) —我轮船员房间失火,需要援助。
—需要什么援助?
—我需要灭火援助。
- 4) 杆状浮标是一种用来标志碍航物,浅滩或航道的浮标。
- 5) 遇难船只远离海岸时,往往需要直升机来搜寻落水船员或幸存者。

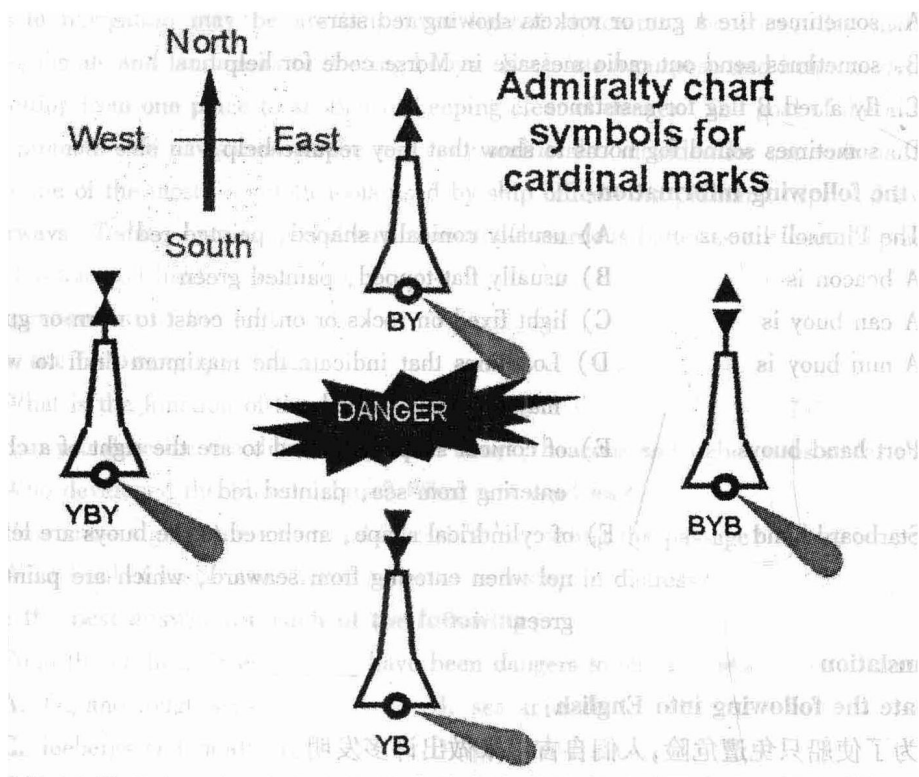
2 Translate the following into Chinese:

In many ports there seems to be a rather lax attitude towards keeping the safety measures and the use of correct handling equipment. This will not only cause accidents, but also damage to the cargo. Incorrect handling equipment will also slow down the loading and discharging operations. In this connection the importance of proper maintenance of the handling equipment is stressed.

IV) Reading Practice

1 Buoyage

In the IALA Buoyage System "A", that is to say the system of buoyage adopted by the International Association of Lighthouse Authorities, Cardinal Marks are divided into four groups corresponding to the four points of the compass.



A North Cardinal Mark is black over yellow in colour. It can be either pillar-shaped or spar-shaped. Top marks are two black cones one above the other and with the points upwards. When a light is fitted, it is white and gives a very quick flash or a quick flash.

An East Cardinal Mark is black with a yellow band in colour. It can be either pillar-shaped or spar-shaped. Top marks are two black cones with their bases together. When a light is fitted it is white in colour and gives three very quick flashes every five seconds or three quick flashes every ten seconds.

A South Cardinal Mark is yellow over black in colour. It can be either pillar-shaped or spar-shaped. Top marks are two black cones one above the other and with their points downwards. When a light is fitted it is white in colour and gives six very quick flashes plus one long flash every ten seconds or six quick flashes plus one long flash every fifteen seconds.

A West Cardinal Mark is yellow with a black band in colour. It can be either pillar-shaped or spar-shaped. Top marks are two black cones one above the other, but with their points together. When a light is fitted, it is white in colour and gives nine very quick flashes every ten seconds or

nine quick flashes every fifteen seconds.

Isolated Danger Marks are black in colour with red bands. They can be either pillar-shaped or spar-shaped. Top marks are two black spheres one above the other. When a light is fitted it is white in colour and flashes in groups of two.

Safe Water Marks are red with white vertical stripes. They are spherical in shape, pillar-shaped or spar-shaped. Top marks, which are optional on spherical buoys, are a single red sphere. When a light is fitted, it is white in colour and it either flashes or occults.

Choose the best choice for each of the following:

- 1) In colour, a North Cardinal Mark is _____.
 - A. black with a yellow band
 - B. yellow over black
 - C. yellow with a black band
 - D. black over yellow
- 2) Top marks of An East Cardinal Mark are _____.
 - A. two black cones with their bases together
 - B. two black cones one above the other with the points upwards
 - C. two black cones one above the other with the points downward
 - D. two black cones one above the other, with the points together
- 3) Isolated Danger Marks are _____ in colour with _____.
 - A. red/red bands
 - B. black/red stripes
 - C. black/red bands
 - D. red/black stripes
- 4) A West Cardinal Mark with light gives _____.
 - A. VQKF1 or QKF
 - B. VQKF1 (3)5s or QKF1 (3)103
 - C. VQKF1 (6) + LFl. 10s or QKF1 (6) + LFl. 10s
 - D. VQKF1 (9)10s or QKF1 (6) + LFl (9)15s
- 5) Safe water marks are _____.
 - A. black in colour with red bands
 - B. yellow over black in colour
 - C. red with white vertical stripes
 - D. yellow with a black band in colour

2 Lighthouse

The safety of ships at sea does not depend only on the arrangements made in the ships themselves. Dangerous coasts and rocks may be seen in the daytime, but they are a threat to safe navigation at night. Lighthouses are therefore erected at such places to warn sailors of the danger. Modern lighthouses are put up at all dangerous places near the courses followed by ships. On some rocky coasts several lighthouses may be built not far from each other, and in order that the sailors on a ship may know which is which, they have different arrangements of lights. One lighthouse will give a