



BUREAU  
VERITAS

# 钢质船舶入级规范

## Rules for the Classification of Steel Ships

E 篇

营运标志

(第 1 分册)

Part

E

Service  
Notations

上海科学普及出版社

第 1,2,3,4,5,6,7 章  
Chapters 1-2-3-4-5-6-7  
8-9-10-11-12-13-14-15  
16-17-18-19-20-21



**BUREAU  
VERITAS**

# **Rules for the Classification of Steel Ships**

## **PART E – ~~Service~~ Notations**

**Chapters 1 – 2 – 3 – 4 – 5 – 6 – 7**

## **钢质船舶入级规范**

**E 篇 营运标志**

**(第1分册)**

**第1, 2, 3, 4, 5, 6, 7章**

IR 472.1 DTM R00 E

June 2000

---

17 bis, Place des Reflets – La Défense 2 – 92400 Courbevoie  
Postal Address : 92077 Paris La Défense Cedex  
Tel. 33 (0) 1 42 91 52 91 – Fax. 33 (0) 1 42 91 52 93  
Email : [veristarinfo@bureauveritas.com](mailto:veristarinfo@bureauveritas.com)  
Web : <http://www.veristar.com>



**ARTICLE 1**

1.1. - BUREAU VERITAS is a Society the purpose of whose Marine Division (the "Society") is the classification (= Classification) of any ship or vessel or structure of any type or part of it or system therein collectively hereinafter referred to as a "Unit" whether linked to shore, river bed or sea bed or not, whether operated or located at sea or in inland waters or partly on land, including submarines, hovercrafts, drilling rigs, offshore installations of any type and of any purpose, their related and ancillary equipment, subsea or not, such as well head and pipelines, mooring legs and mooring points or otherwise as decided by the Society.

The Society:

- prepares and publishes Rules for classification, Guidance Notes and other documents (= Rules -);
- issues Certificates, Attestations and Reports following its interventions (= Certificates -);
- publishes Registers.

1.2. - The Society also participates in the application of National and International Regulations or Standards, in particular by delegation from different Governments. Those activities are hereafter collectively referred to as "Certification".

1.3. - The Society can also provide services related to Classification and Certification such as ship and company safety management certification, training activities, all activities and duties incidental thereto such as documentation on any supporting means, software, instrumentation, measurements, tests and trials on board.

1.4. - The interventions mentioned in 1.1., 1.2. and 1.3. are referred to as "Services". The party and/or its representative requesting the services is hereinafter referred to as the "Client".

The Services are prepared and carried out on the assumption that the Clients are aware of the International Maritime and/or Offshore Industry (the "Industry") practices.

1.5. - The Society is neither and may not be considered as an Underwriter, Broker in ship's sale or chartering, Expert in Unit's valuation, Consulting Engineer, Controller, Naval Architect, Manufacturer, Shipbuilder, Repair yard, Charterer or Shipowner who are not relieved of any of their expressed or implied obligations by the interventions of the Society.

**ARTICLE 2**

2.1. - Classification is the appraisalment given by the Society for its Client, at a certain date, following surveys by its Surveyors along the lines specified in Articles 3 and 4 hereafter on the level of compliance of a Unit to its Rules or part of them. This appraisalment is represented by a class entered on the Certificates and periodically transcribed in the Society's Register.

2.2. - Certification is carried out by the Society along the same lines as set out in Articles 3 and 4 hereafter and with reference to the applicable National and International Regulations or Standards.

2.3. - It is incumbent upon the Client to maintain the condition of the Unit after surveys, to present the Unit for surveys and to inform the Society without delay of circumstances which may affect the given appraisalment or cause to modify its scope.

2.4. - The Client is to give to the Society all access and information necessary for the performance of the requested Services.

**ARTICLE 3**

3.1. - The Rules, procedures and instructions of the Society take into account at the date of their preparation the state of currently available and proven technical knowledge of the Industry. They are not a code of construction neither a guide for maintenance or a safety handbook.

Committees consisting of personalities from the Industry contribute to the development of those documents.

3.2. - The Society only is qualified to apply its Rules and to interpret them. Any reference to them is void unless it involves the Society's intervention.

3.3. - The Services of the Society are carried out by professional Surveyors according to the Code of Ethics of the Members of the International Association of Classification Societies (IACS).

3.4. - The operations of the Society in providing its Services make use of random inspections and are absolutely exclusive of any monitoring and thorough verification.

**ARTICLE 4**

4.1. - The Society, acting by reference to its Rules:

- reviews the construction arrangements of the Units as shown on the documents presented by the Client;
- conducts surveys at the place of their construction;
- classifies Units and enters their name in its Register;
- surveys periodically the Units in service to note that the requirements for the maintenance of class are met.

The Client is to inform the Society without delay of circumstances which may cause the date or the extent of the surveys to be changed.

**ARTICLE 5**

5.1. - The Society acts as a provider of services. This cannot be construed as an obligation bearing on the Society to obtain a result or in a warranty.

5.2. - The certificates issued by the Society pursuant to 5.1. here above are a statement on the level of compliance of the Unit to its Rules or to the documents of reference for the Services provided for.

In particular, the Society does not engage in any work relating to the design, building, production or repair checks, neither in the operation of the Units or in their trade, neither in any advisory services, and cannot be held liable on those accounts. Its certificates cannot be construed as an implied or express warranty of safety, fitness for the purpose, seaworthiness of the Unit or of its value for sale, insurance or chartering.

5.3. - The Society does not declare the acceptance or commissioning of a Unit, that being the exclusive responsibility of its owner.

5.4. - The Services of the Society cannot create any obligation bearing on the Society or constitute any warranty of proper operation, beyond any representation set forth in the Rules, of any Unit, equipment or machinery, computer software of any sort or other comparable concepts that has been subject to any survey by the Society.

**ARTICLE 6**

6.1. - The Society accepts no responsibility for the use of information related to its Services which was not provided for the purpose by the Society or with its assistance.

6.2. - If the Services of the Society cause to the Client a damage which is proved to be the direct and reasonably foreseeable consequence of an error or omission of the Society, its liability towards the Client is limited to ten times the amount of fee paid for the Service having caused the damage. This limit is subject to a minimum of fifty thousand (50.000) French francs, and to a maximum which is the greater of five millions (5.000.000) French francs and one and a half times the above mentioned fee.

The Society bears no liability for indirect or consequential loss such as e.g. loss of revenue, loss of profit, loss of production, loss relative to other contracts and indemnities for termination of other agreements.

6.3. - All claims are to be presented to the Society in writing and on pain of debarment by right, within three months of the date the Services were supplied or of the date the events which are taken advantage of were first known.

**ARTICLE 7**

7.1. - Requests for Services are to be in writing.

7.2. - Either the Client or the Society can terminate as of right the requested Services by prior written notice according to paragraph 7.3., for convenience, and without prejudice to the provisions in Article 8 hereunder.

7.3. - The notice due by the Society to the Client to exercise the possibility under 7.2. is of three calendar months and conversely, of ten banking days.

7.4. - The class granted to the concerned Units and the previously issued certificates remain valid until the date of effect of the notice issued according to 7.2. hereabove subject to compliance with 2.3. hereabove and Article 8 hereunder.

**ARTICLE 8**

8.1. - The Services of the Society, whether completed or not, involve the payment of fee upon receipt of the invoice and the reimbursement of the expenses incurred.

8.2. - The class of a Unit may be suspended in the event of non-payment of fee after a first unfruitful notification to pay.

**ARTICLE 9**

9.1. - The documents and data provided to or prepared by the Society for its Services, and the information available to the Society, are treated as confidential. However:

- Clients have access to the data they have provided to the Society and to the reports and certificates which have been prepared for them;
- copy of the documents made available for the classification of the Unit can be handed over to another Classification Society Member of the International Association of Classification Societies (IACS) in case of the Unit's transfer of class;
- the data relative to the evolution of the Register, to the class suspension and to the survey status of the Units are passed on to IACS according to the association working rules;
- technical records and history related to specific class notations may be transferred to the new owner in case of change of ownership;
- the certificates, documents and information relative to the Units classed with the Society are passed on upon order of the flag authorities of the Unit or of a Court having jurisdiction.

The documents and data are subject to a file management plan.

**ARTICLE 10**

10.1. - Any delay or shortcoming in the performance of its Services by the Society arising from an event not reasonably foreseeable by or beyond the control of the Society shall be deemed not to be a breach of contract.

**ARTICLE 11**

11.1. - The Society may designate another Surveyor at the request of the Client in case of diverging opinions during surveys.

11.2. - Disagreements of a technical nature between the Client and the Society can be submitted by the Society to the advice of its Classification Committee.

**ARTICLE 12**

12.1. - Disputes over the Services carried out by delegation of Governments are assessed within the framework of the applicable agreements with the States, International Conventions and national rules.

12.2. - Disputes arising out of the payment of the Society's invoices by the Client are submitted to the Court of Nanterre, France.

12.3. - Other disputes over the present General Conditions or over the Services of the Society are exclusively submitted to arbitration in London according to the London arbitration procedural rules in force. English law applies.

**ARTICLE 13**

13.1. - These General Conditions constitute the sole contractual obligations binding together the Society and the Client, to the exclusion of all other representation, statements, terms, conditions whether express or implied. They may be varied in writing by mutual agreement.

13.2. - The invalidity of one or more stipulations of the present General Conditions does not affect the validity of the remaining provisions.

13.3. - The definitions herein take precedence over any definitions serving the same purpose which may appear in other documents issued by the Society.



### 第1条

1.1 BUREAU VERITAS 是一家船级社,其海运分部(“本社”)的宗旨是任何船舶或任何类型的结构物或其一部分,或其集合体,以下称为“装置”的入级,无论这些装置是否与岸、河底或海底相联结,也无论其是否运行或位于海上、或内陆水域,或部分在岸上。包括潜艇、气垫船、各种类型和各种用途的钻井平台、近海装置,它们的相关和辅助设备,其在水下或不在水下,例如井口和管系,系泊腿和系泊点或由本社确定的其他项目的入级。本社

- 编制和出版入级规范、指导性文件及其他文件(《规范》)
- 介入后颁发证书、证明及报告(《证书》)
- 出版船舶录

1.2 本社也参与国家及国际规则或标准的应用,特别是通过来自不同政府的代表团。这些活动以下统称为“认证”。

1.3 本社也能提供与“入级”和“认证”有关的服务,例如船舶和公司的安全管理认证;训练活动;附随发生的所有活动和任务,例如对任何支持方式的文件、软件、测试设备、测量方法、试验和在船上的试航。

1.4 在 1.1, 1.2 和 1.3 中所述的介入称之为“服务”。要求这些服务的一方和/或其代表,以下称之为“客户”。

按照各客户是了解国际海事和/或近海工业实践(“工业”)这一假定作出和进行服务。

1.5 本社既不是,也不能被认为是在船舶销售或租船中的保险商、经纪人、装置评估的专家、咨询工程师、管理人员、造船设计师、制造厂、船厂、修船厂、租船者或船东,不得由于本社的介入而减轻上述各方的任何明示的或暗指的责任。

### 第2条

2.1 入级是由本社在一定时间内对于其客户所提供的,由本社验船师按照此后第3条和第4条中的规定,对于某一装置符合其规范或此规范的一部分公平地进行随后的检验。这一评价由记入其证书中的船级来表示,且定期地载入本社的船舶录。

2.2 认证是由本社同样按照此后第3条和第4条中

的规定,且参照有关的国家及国际的规则或标准进行。

2.3 客户应负责在检验后保持此装置的状态,向验船师介绍该装置,且把可能影响所涉及评价或引起修改其适用范围的情况无延迟地通知本社。

2.4 客户应向本社提供为完成所要求服务所必需的所有出入便利和信息。

### 第3条

3.1 本社的规范、程序和说明考虑了其编制之日的现行可获得的状态,且已被工业的技术知识所证实。它们不是建造的法规,也不是维护的指南或安全的手册。

由来自工业界的人士所组成的委员会编制了这些文件。

3.2 本社仅限于采用它的规范和对它进行解释。除非其包括了本社的介入,否则对于它们(指规范)的任何参照都是无效的。

3.3 本社的服务由专业的验船师按照国际船级社协会(IACS)之成员的道德法规进行。

3.4 本社在提供其服务上的运作采用了随机检查,且完全排除了任何监测和彻底的验证。

### 第4条

4.1 本社参照其规范:

- 审查由客户所提供文件上所示之装置的结构布置
- 在它们的制造地点进行检验
- 对装置进行入级,且把它们的名字记入船舶录
- 对所服务的装置作定期检验,并说明须满足的保持船级的要求

客户应把可能引起改变检验日期或检验范围的情况无延迟地通知本社。

### 第5条

5.1 本社作为服务的提供者起作用。这并不能被认为本社要对所得的结果或在担保中承担义务。

5.2 由本社按以上 5.1 所颁发的证书说明了该装置符合它的规范或者作为所提供服务之依据的文件。

特别是,本社并不从事与设计、建造、生产或修理检查有关的任何工作,也不从事装置的操作或它们的贸易、任何咨询服务,且不能认为对那些计算

负责任。它的证书不能被认为是一种暗指的或明确的对安全、用途的适用性,装置的适航性或它的销售的价值、保险或租船的担保。

5.3 本社并不声明某一装置的可予接受或交付使用,这完全是船东单方面的责任。

5.4 本社的服务不能使本社产生(超出规范中所规定的任何表示的)任何义务或构成对已经由本社作任何检验的任何装置、设备或机械,任何种类的计算机软件或其他可比较的构思的正确工作的任何担保。

## 第6条

6.1 本社对其服务有关的,并非由本社或由其协助为此目的而提供的信息的使用不承担任何责任。

6.2 如果本社的服务对客户造成损失,且已证明此损失是由于本社的错误或疏忽的直接的和合理地预见的后果,则它对客户的责任限于其为此项已造成损失之服务所已付总费用的10倍。

此项限额系指最少为五万(50 000)法郎,最多为五百万(5 000 000)法郎或上述费用的1.5倍(取大者)。

本社对间接的或由此引起的损失,例如收入的损失、利润的损失、生产的损失,与其他合同有关的损失和对其他协议终止的赔偿等不承担责任。

6.3 所有索赔应以书面和正当形式,在所提供服务日期,或在首次发现事故日期的3个月之内向本社提出。

## 第7条

7.1 应以书面形式对服务提出要求。

7.2 在按7.3款书面通知之前,为方便起见,且不使用以下第8条中的规定受到损害,无论是客户,还是本社都可中止此要求的服务。

7.3 预定由本社向客户发出通知,按7.2行使可能性的期限为3个日历月,且相反地为10个银行日。

7.4 为使对有关装置所授予的船级和先前所颁发证书在按以上的7.2颁发的通知的生效日期之前仍保持有效,须符合以上2.3和以下第8条的要求。

## 第8条

8.1 本社的服务,不论其完成或未完成,均应包含在收到发票时支付费用,且偿还已发生的支出。

8.2 在第1次无效果的支付通知之后仍不支付费用的情况下,可以中止装置的船级。

## 第9条

9.1 为其服务而提供给本社或由本社编制的文件

和资料,以及本社获得的信息均应保守秘密,但

- 客户已经利用他们提供给船级社的资料和已为他们编制的报告和证书
- 在装置的船级转移的情况下,该装置入级用文件的复印件可以递交给国际船级社协会(IACS)的其他船级社成员
- 与该装置的船舶录的评价,与船级中止和与检验状态有关的资料需按该协会工作规则转送给IACS
- 在所有权改变的情况下,与其特定的船级附加标志有关的技术记录和历史可以递交给新船东
- 按该装置的船旗国主管机关或有管辖权法院的命令

这些文件和资料须遵照文件管理计划。

## 第10条

10.1 本社在完成其服务中由于由本社或超出本社控制的不可合理地预见事故所造成的任何延迟或缺点不应被认为是违背合同。

## 第11条

11.1 在检验中意见分歧的情况下,本社可在客户有要求时指定另一位验船师。

11.2 在客户与本社之间技术性质的意见不一致可由本社提交给它的人级委员会听取意见。

## 第12条

12.1 与政府的代表所进行的服务之间的争议应在与国家的有关协议、国际公约和国家规则的框架之内评定。

12.2 由客户对本社的发票的支付所引起的争议应提交法国的 Nanterre 法院。

12.3 对现行的一般条件或对本社的服务的其他争议应专门地按照有效的伦敦仲裁程序规范提交给伦敦仲裁。采用英国的法律。

## 第13条

13.1 这些一般条件构成了把本社与客户结合在一起的唯一的合同义务,其不包括所有其他的表述、说明、术语、条件,无论是明示的,或暗指的。它们可以通过相互协议以书面形式变化。

13.2 现行一般条件的一项或多项条款的无效不应影响其余条款的有效性。

13.3 在这里的定义优先于可能出现在由本社颁发的其他文件中,服务于同一目的的任何定义。

**Unless otherwise specified, these rules apply to ships for which contracts are signed after January 1st, 2001. The Society may refer to the contents hereof before January 1st, 2001 at the special request of the party applying for classification.**

除非另有规定，本规范适用于2001年1月1日以后签订合同的船舶。在2001年1月1日之前对适用入级用户的特殊要求，本社可以引证本规范内容。



# RULES FOR THE CLASSIFICATION OF SHIPS

## Part E Service Notations

Chapters **1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21**

---

<b>Chapter 1</b>	<b>RO-RO CARGO SHIPS</b>
<b>Chapter 2</b>	<b>CONTAINER SHIPS</b>
<b>Chapter 3</b>	<b>LIVESTOCK CARRIERS</b>
<b>Chapter 4</b>	<b>BULK CARRIERS</b>
<b>Chapter 5</b>	<b>ORE CARRIERS</b>
<b>Chapter 6</b>	<b>COMBINATION CARRIERS</b>
<b>Chapter 7</b>	<b>OIL TANKERS AND FLS TANKERS</b>
<b>Chapter 8</b>	<b>CHEMICAL TANKERS</b>
<b>Chapter 9</b>	<b>LIQUEFIED GAS CARRIERS</b>
<b>Chapter 10</b>	<b>TANKERS</b>
<b>Chapter 11</b>	<b>PASSENGER SHIPS</b>
<b>Chapter 12</b>	<b>RO-RO PASSENGER SHIPS</b>
<b>Chapter 13</b>	<b>SHIPS FOR DREDGING ACTIVITY</b>
<b>Chapter 14</b>	<b>TUGS</b>
<b>Chapter 15</b>	<b>SUPPLY VESSELS</b>
<b>Chapter 16</b>	<b>FIRE FIGHTING VESSELS</b>
<b>Chapter 17</b>	<b>OIL RECOVERY SHIPS</b>
<b>Chapter 18</b>	<b>CABLE-LAYING SHIPS</b>
<b>Chapter 19</b>	<b>NON-PROPELLED UNITS</b>
<b>Chapter 20</b>	<b>FISHING VESSELS</b>
<b>Chapter 21</b>	<b>SHIPS NOT COVERED BY SOLAS</b>



# 钢质船舶入级规范

(文义以英文版为准)

## E 篇

### 营运标志

(第 1 分册)

第 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21 章

---

- 第 1 章 滚装船
- 第 2 章 集装箱船
- 第 3 章 牲畜运输船
- 第 4 章 散货船
- 第 5 章 矿砂运输船
- 第 6 章 兼用运输船
- 第 7 章 油船和 FLS 液货船
- 第 8 章 化学品船
- 第 9 章 液化气船
- 第 10 章 油船
- 第 11 章 客船
- 第 12 章 滚装客船
- 第 13 章 挖泥船
- 第 14 章 拖船
- 第 15 章 供应船
- 第 16 章 消防船
- 第 17 章 油回收船
- 第 18 章 布缆船
- 第 19 章 无动力船
- 第 20 章 渔船
- 第 21 章 SOLAS 未含盖的船舶

# CHAPTER 1

## RO-RO CARGO SHIPS

### Section 1 General

1	General	2
1.1	Application	
1.2	Summary table	

### Section 2 Hull and Stability

1	General	4
1.1	Application	
1.2	Definitions	
2	Stability	4
2.1	Damage stability requirements for ship where additional class notation SDS is required	
3	Structure design principles	4
3.1	General	
3.2	Hull structure	
4	Design loads	4
4.1	Wheeled loads	
5	Hull girder strength	4
5.1	Basic criteria	
6	Hull scantlings	4
6.1	Plating	
6.2	Ordinary stiffeners	
6.3	Primary supporting members	
7	Other structures	6
7.1	Bow doors and inner doors	
7.2	Side doors and stern doors	
7.3	Movable decks and inner ramps	
7.4	External ramps	

### Section 3 Machinery and Systems

1	Scuppers and sanitary discharges	8
1.1	Drainage of ro-ro cargo spaces, intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion	

第 1 章  
滚装船

第 1 节 总则

1	一般规定	3
1.1	适用范围	
1.2	汇总表	

第 2 节 船体和稳性

1	一般规定	5
1.1	适用范围	
1.2	定义	
2	稳性	5
2.1	对于附加 SDS 营运标志船舶的破损稳性要求	
3	结构设计原则	5
3.1	一般要求	
3.2	船体结构	
4	设计载荷	5
4.1	车轮载荷	
5	船体总纵强度	5
5.1	基本标准	
6	船体尺寸	5
6.1	板	
6.2	普通扶强材	
6.3	主要支撑部件	
7	其他结构	7
7.1	船首门和内部门	
7.2	舷门和尾门	
7.3	移动式甲板和内部跳板	
7.4	外部跳板	

第 3 节 机械和系统

1	排水孔和卫生排泄	9
1.1	载运车上油箱中有自用燃油的机动车辆的滚装货物处所的排水	

**Section 4   Electrical Installations**

<b>1</b>	<b>General</b>	<b>10</b>
1.1	Applicable requirements	
1.2	Documentation to be submitted	
1.3	Safety characteristics	
<b>2</b>	<b>Installation</b>	<b>12</b>
2.1	Installations in closed ro-ro cargo spaces	
2.2	Installations in cargo spaces other than ro-ro cargo spaces but intended for the carriage of motor vehicles	
<b>3</b>	<b>Type approved components</b>	<b>12</b>
3.1		

第 4 节 电气装置

1	一般规定	11
1.1	适用要求	
1.2	送审图纸	
1.3	安全特性	
2	装置	13
2.1	封闭滚装货舱内的电气装置	
2.2	除滚装货舱外用于载运机动车的货舱内的电气装置	
3	型式认可元件	13
3.1		

# CHAPTER 2

## CONTAINER SHIPS

### Section 1 General

1	General	16
1.1	Application	
1.2	Summary table	

### Section 2 Hull and Stability

1	General	18
1.1	Application	
2	Stability	18
2.1	Intact stability	
2.2	Damage stability requirements for ships where the additional class notation SDS has been required	
3	Structure design principles	20
3.1	Materials	
3.2	Strength principles	
3.3	Bottom structure	
3.4	Side structure	
3.5	Deck structure	
3.6	Bulkhead structure	
4	Design loads	22
4.1	Hull girder loads	
4.2	Forces on containers	
4.3	Loading conditions for primary structure analysis	
5	Hull scantlings	28
5.1	Plating	
5.2	Primary supporting members	
6	Other structure	28
6.1	Non-weathertight hatch covers above superstructure deck	
7	Fixed cell guides	28
7.1	General	
7.2	Arrangement of fixed cell guides	
7.3	Strength criteria	
8	Construction and testing	30
8.1	Special structural details	

### Section 3 Machinery

1	Open top container ships	32
1.1		

第 2 章  
集装箱船

第 1 节 总则

1	一般规定	17
1.1	适用范围	
1.2	汇总表	

第 2 节 船体和稳性

1	一般要求	19
1.1	适用范围	
2	稳性	19
2.1	完整稳性	
2.2	要求授予船舶附加船级符号 SDS 的破舱稳性要求	
3	结构设计原则	21
3.1	材料	
3.2	强度原则	
3.3	底部结构	
3.4	船侧结构	
3.5	甲板结构	
3.6	舱壁结构	
4	设计载荷	23
4.1	船体梁载荷	
4.2	集装箱上的力	
4.3	主要构件分析的装载情况	
5	船体尺寸	29
5.1	板	
5.2	主要支撑部件	
6	其他结构	29
6.1	上层建筑甲板以上的非风雨密舱口盖	
7	固定导轨	29
7.1	一般要求	
7.2	固定导轨的布置	
7.3	强度衡准	
8	结构和试验	31
8.1	特殊的结构细节	

第 3 节 机器

1	无舱盖集装箱船	33
1.1	一般要求	

# CHAPTER 3

## LIVESTOCK CARRIERS

### Section 1 General

1	General	36
1.1	Application	
1.2	Summary table	

### Section 2 Hull and Stability

1	General arrangement design	38
1.1	Livestock arrangement	
1.2	Arrangement of spaces dedicated to the carriage of livestock	
1.3	Means of escape and access	
2	Stability	38
2.1	Intact stability	
3	Hull girder strength	38
3.1	Application	
4	Hull scantlings	38
4.1	Scantlings of plating, ordinary stiffeners and primary supporting members	

### Section 3 Systems Serving Livestock Spaces

1	General	40
1.1	Application	
1.2	Documents to be submitted	
2	Design of the systems	40
2.1	General	
2.2	Ventilation system	
2.3	Fodder and fresh water systems	
2.4	Washing system	
2.5	Drainage system	

### Section 4 Fire-Fighting Systems in Livestock Spaces

1	General	44
1.1	Application	
1.2	Documents to be submitted	
2	Fire-fighting appliances	44
2.1	Fire hoses	
2.2	Additional fire-fighting means	

# 第 3 章

## 牲畜运输船

### 第 1 节 总则

1	一般规定	37
1.1	适用范围	
1.2	汇总表	

### 第 2 节 船体和稳性

1	总布置设计	39
1.1	牲畜布置	
1.2	专用于运载牲畜处所的布置	
1.3	逃生和通道措施	
2	稳性	39
2.1	完整稳性	
3	船体总纵强度	39
3.1	适用范围	
4	船体构件尺寸	39
4.1	板、普通扶强材和主要支撑构件尺寸	

### 第 3 节 牲畜处所的服务系统

1	一般规定	41
1.1	适用范围	
1.2	应提交的资料	
2	系统的设计	41
2.1	一般规定	
2.2	通风系统	
2.3	饲料和淡水系统	
2.4	清洗系统	
2.5	排污系统	

### 第 4 节 牲畜处所的消防系统

1	一般规定	45
1.1	适用范围	
1.2	应提交的文件	
2	消防设施	45
2.1	消防水龙带	
2.2	附加消防措施	

# CHAPTER 4

## BULK CARRIERS

### Section 1 General

1	General	48
1.1	Application	
1.2	Summary table	

### Section 2 Ship Arrangement

1	General	50
1.1	Application	
2	General arrangement design	50
2.1	Access arrangement to double bottom and pipe tunnel	
2.2	Access arrangement to cargo holds	

### Section 3 Hull and Stability

1	General	52
1.1	Loading manual and loading instruments	
2	Stability	52
2.1	Definitions	
2.2	Intact stability	
2.3	Damage stability requirements for ships where additional class notation SDS is required	
3	Structure design principles	56
3.1	Double bottom structure	
3.2	Single side structure	
3.3	Double side structure	
3.4	Deck structure	
3.5	Transverse vertically corrugated watertight bulkheads	
4	Design loads	66
4.1	Hull girder loads	
4.2	Hull girder loads in flooded conditions of single side skin bulk carriers equal to or greater than 150 m in length	
4.3	Local loads in flooding conditions on transverse watertight bulkheads of single side skin bulk carriers equal to or greater than 150 m in length	
4.4	Local loads in flooding conditions on the double bottom of single side skin bulk carriers equal to or greater than 150m in length	
4.5	Additional requirements on local loads for ships with the additional service feature heavycargo	
4.6	Loading conditions for primary structure analysis	