



RULES FOR BUILDING AND CLASSING

**HIGH-SPEED NAVAL CRAFT
2018**

**NOTICES AND
GENERAL INFORMATION**

**American Bureau of Shipping
Incorporated by Act of Legislature of
the State of New York 1862**

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Notices and General Information

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Introduction

1. The year 2018 edition of the *Rules for Building and Classing High-Speed Naval Craft* consists of the eight (8) booklets as shown in Table 1. With regard to three booklets, Part 1, Part 2, and Part 7:
 - a) The purpose of the generic title *ABS Rules for Conditions of Classification – High-Speed Craft (Part 1)* is to reflect the expanded contents of PART 1, as a result of including consolidated requirements for “Classification” applicable to all types of and sizes of high-speed craft as specified in the Foreword to Part 1. Additional specific requirements are contained in Chapters 2 and 3 of Part 1.
 - b) The purpose of the generic title *ABS Rules for Materials and Welding* of PART 2 is to emphasize the common applicability of the requirements to ABS-classed vessels, other marine structures and their associated machinery, and thereby make PART 2 more readily a common “PART” of various ABS Rules and Guides, as appropriate.
 - c) The purpose of the generic title *ABS Rules for Survey After Construction (Part 7)* is to reflect the expanded contents of PART 7, as a result of including consolidated requirements for “Surveys After Construction” applicable to all types and sizes of vessels, barges and specific shipboard arrangements/systems, etc., as specified in Part 7, Chapter 1, Section 1.
2. The numbering system applied in the Rules is shown in Table 2.
3. The primary changes from the 2017 Rules are identified and listed in Table 3. The effective date of the indicated Rule Changes is 1 January 2017, unless specifically indicated otherwise.
4. The effective date of each technical change since 1993 is shown in parenthesis at the end of the subsection/paragraph titles within the text of each Part. Unless a particular date and month are shown, the years in parentheses refer to the following effective dates:

(2000) and after	1 January 2000 (and subsequent years)	(1996)	9 May 1996
(1999)	12 May 1999	(1995)	15 May 1995
(1998)	13 May 1998	(1994)	9 May 1994
(1997)	19 May 1997	(1993)	11 May 1993
5. Until the next edition of the *Rules for Building and Classing High-Speed Naval Craft* is published, Rule Change Notices and/or Corrigenda, as necessary, will be published on the ABS website – www.eagle.org – only, and will be available free for downloading. It is not intended to publish hard copies of future Rule Change Notices and/or Corrigenda to existing Rules or Guides. The consolidated edition of the *Rules for Building and Classing High-Speed Naval Craft*, which includes Rule Change Notices and/or Corrigenda using different colors for easy recognition, will be published on the ABS website only when RCN and/or Corrigenda are issued.
6. The listing of CLASSIFICATION SYMBOLS AND NOTATIONS is available from the ABS website www.eagle.org for download.

TABLE 1
Applicable Editions of Booklets Comprising 2018 Rules

Notices and General Information		2018
Part 1:	Rules for Conditions of Classification – High-Speed Craft	2018*
Part 2:	Rules for Materials and Welding Rules for Testing and Certification of Materials Rules for Welding and Fabrication	2018*
Part 2:	Rules for Materials and Welding – Aluminum and Fiber Reinforced Plastics (FRP)	2018*
Part 2:	Rule Requirements for Materials and Welding – Supplementary Requirements for Naval Vessels	2000*
Part 3:	Hull Construction and Equipment	2018
Part 4:	Craft Systems and Machinery	2018
Part 7:	Rules for Survey After Construction	2018*

* *Note:* The latest edition of these Rules is to be referred to. These Rules may be downloaded from the ABS website at www.eagle.org, Rules and Guides, Downloads or may be ordered separately from the ABS Publications online catalog at www.eagle.org, Rules and Guides, Catalog.

TABLE 2
Division and Numbering of Rules and Guides

<i>Division</i>	<i>Number</i>
Part	Part 1
Chapter	Part 1, Chapter 1
Section	Section 1-1-1
Subsection (see Note 1)	1-1-1/1
Paragraph (see Note 1)	1-1-1/1.1
Subparagraph	1-1-1/1.1.1
Item	1-1-1/1.1.1(a)
Subitem	1-1-1/1.1.1(a)i
Appendix	Appendix 1-1-A1 or Appendix 1-A1-1

Note:

- 1 An odd number (1, 3, 5, etc.) numbering system is used for the Rules and Guides. The purpose is to permit future insertions of even-numbered paragraphs (2, 4, 6, etc.) of text and to avoid the necessity of having to renumber the existing text and associated cross-references, as applicable, within the Rules and associated process instructions, check sheets, etc.

Rule Change Notice (2018)

TABLE 3
Summary of Changes from the 2017 Rules
EFFECTIVE DATE 1 March 2017 – shown as (1 March 2017)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 1	Rules for Conditions of Classification – High-Speed Craft	
1-1-1/7	Scope of Classification	To align with the other sections of Part 1 regarding disclaimers of liability for the responsibilities of vessel owners/operators in this article.
1-1-6/11 (New)	Plan Submittal	To align ABS plan submittal process with our legal duty to protect client and third party intellectual property rights.

EFFECTIVE DATE 1 May 2017 – shown as (1 May 2017)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 1	Rules for Conditions of Classification – High-Speed Craft	
1-1-4/3.1	Effective Date	To remove the application of the six-month rules for Guides, which are meant for immediate implementation. (Incorporates Notice No. 2)

EFFECTIVE DATE 1 January 2018 – shown as (2018)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 1	Rules for Conditions of Classification – High-Speed Craft	
1-1-A2/5.1.5	Duplicate Product Design Assessment	To clarify ABS policy for PDA-DUP issuance, confirmed by ABS Programs.

EFFECTIVE DATE 1 July 2017 – shown as (1 July 2016)
 (based on the contract date for new construction between builder and Owner)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 3	Hull Construction and Equipment	
3-2-8/17.1	Strength	To reflect current practice for cover plates and address vortex shedding for spade rudders with embedded trunks. (Incorporates Notice No. 1)
3-2-8/Figure 5 (New)	<No Title>	To reflect current practice for cover plates and address vortex shedding for spade rudders with embedded trunks. (Incorporates Notice No. 1)
3-2-8/Figure 6 (New)	<No Title>	To reflect current practice for cover plates and address vortex shedding for spade rudders with embedded trunks. (Incorporates Notice No. 1)
3-2-8/Figure 7 (New)	<No Title>	To reflect current practice for cover plates and address vortex shedding for spade rudders with embedded trunks. (Incorporates Notice No. 1)
3-2-8/17.1.2	In way of Cutouts	To reflect current practice for cover plates and address vortex shedding for spade rudders with embedded trunks. (Incorporates Notice No. 1)

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 4	Craft Systems and Machinery	
4-2-1/13.9.2iv)	<No Title>	To include the alternative of normal continuous cruise power, in line with IACS UR M51 Rev.4, Feb. 2015. (Incorporates Notice No. 1)
4-2-1/Table 1	Required Material and Nondestructive Tests of Diesel Engine Parts	To clarify the scope of hydraulic testing for high pressure fuel injection pipes including common fuel rail and high pressure common servo oil systems, in line with IACS UR M72 rev. 1 Mar. 2016. (Incorporates Notice No. 1)
4-2-1/Table 2	Test Pressures for Parts of Internal-combustion Engines	To clarify the scope of hydraulic testing for high pressure fuel injection pipes including common fuel rail and high pressure common servo oil systems, in line with IACS UR M72 rev. 1 Mar. 2016. (Incorporates Notice No. 1)
4-2-2/1.1	Application	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/1.3.1	Turbocharger	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/1.3.3 (New)	Generic Range	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/1.5.1ii)	<No Title>	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/3.3	Category A and B Turbochargers	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/3.5	Category C Turbochargers	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/3.7.3	Certification Under Quality Assurance Assessment PQA (IACS UR Z26 Alternative Certification Scheme)	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/5.1	General	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/5.3	Containment	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/5.7	Type Testing (applicable to category B and C turbochargers)	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/7	Piping Systems for Turbochargers	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/8 (New)	Alarms and Monitoring	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/11.1	Shop Inspection and Tests	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/11.1.1	Material Tests	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/11.1.5	Shop Trial	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-2-2/11.3	Certification of Turbochargers	To clarify the categorization of turbochargers and the application of Type Approval. (Incorporates Notice No. 1)
4-3-4/13.1.9 (New)	System Response Under Failure	To detect failure in the steering gear control system and provide the operator with sufficient information to decide what action is required for the different failure scenarios, in line with IACS UR E25 June 2016. (Incorporates Notice No. 1)
4-3-4/Table 1	Steering Gear Instrumentation	To detect failure in the steering gear control system and provide the operator with sufficient information to decide what action is required for the different failure scenarios and to require a deviation alarm in addition to basic failure detection, in line with IACS UR E25 June 2016. (Incorporates Notice No. 1)

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-3-5/1.1	Application	To clarify the various terms used for steering systems and their associated equipment, in line with IACS UI SC242 Rev.1, Apr. 2016. (Incorporates Notice No. 1)
4-3-5/1.5.6 (New)	Steering System	To clarify the various terms used for steering systems and their associated equipment, in line with IACS UI SC242 Rev.1, Apr. 2016. (Incorporates Notice No. 1)
4-3-5/5.12.2(b)iii)	<No Title>	To clarify that the capacity requirements apply regardless whether the steering systems are arranged with common or dedicated power units that the requirements of 4-3-4/11.1 apply to each steering system in ships fitted with multiple steering systems, in line with IACS UI SC242 Rev.1, Apr. 2016. (Incorporates Notice No. 1)
4-3-5/5.12.4 (New)	Electric and Electrohydraulic Steering Systems	To clarify that the capacity requirements apply regardless whether the steering systems are arranged with common or dedicated power units that the requirements of 4-3-4/11.1 apply to each steering system in ships fitted with multiple steering systems, in line with IACS UI SC242 Rev.1, Apr. 2016. (Incorporates Notice No. 1)
4-3-5/7.5 (New)	Failure Detection and Response	To detect failure in the steering gear control system and provide the operator with sufficient information to decide what action is required for the different failure scenarios, in line with IACS UR E25 June 2016. (Incorporates Notice No. 1)
4-6-2/5.7.3(c)	Fire Resistance	To clarify the cases in which flexible hoses need not be of fire-resistant type. (Incorporates Notice No. 1)
4-6-2/5.9.1(c) (Deleted)	Operational Conditions	To minimize the use of slip-on joints for pipe connection except for cases where compensation of axial pipe deformation is necessary and to clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(e)	Fire Testing	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(f)	Locations	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(h) (Deleted)	Application	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(g)	Joints	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(i)	Slip-on Joints	To minimize the use of slip-on joints for pipe connection except for cases where compensation of axial pipe deformation is necessary and to clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.1(j)	Application	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)ii)	Selection of Test Specimen	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v) 1(a)	<No Title>	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v)2	Vibration (Fatigue) Test	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v)4	Burst Pressure Test	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v)5	Pull-out Test	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v)6	Fire Endurance Test	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/5.9.2(e)v)7	Vacuum Test	To clarify the requirements, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-6-2/Table 9	Examples of Mechanical Joints	To update the figures for “Machine Grooved Type” and “Slip Type” slip-on joints, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-6-2/Table 10	Application of Mechanical Joints	To clarify the restrictions for on slip-on joints and flexible hoses used for L.O. lines and other flammable oils, and installed on open decks, in line with IACS UR P2 Rev.2, Mar. 2016. (Incorporates Notice No. 1)
4-8-2/7.25	Harmonics	To specify that the harmonic distortion calculation report is to be kept on board for exceptions to the 8% limit in cases where all installed equipment and systems have been designed for higher THD levels, in line with IACS UR E24 June 2016. (Incorporates Notice No. 1)
4-8-2/9.24 (New)	Harmonic Distortion for Ship Electrical Distribution System including Harmonic Filters	To introduce requirements for survey of harmonic filters and harmonic distortion levels, in line with IACS UR E24 June 2016. (Incorporates Notice No. 1)
4-8-2/9.25	Protection of Harmonic Filter Circuits Associated with Electric Propulsion	To introduce requirements for survey of harmonic filters and harmonic distortion levels, in line with IACS UR E24 June 2016. (Incorporates Notice No. 1)
4-8-3/9.1	Standard of Compliance	To identify the standards that have been withdrawn or replaced by new ones and to consider approaches for cables not manufactured to IEC standards identified, in line with IACS UR E7 Rev.4 Apr. 2016. (Incorporates Notice No. 1)
4-9-3/Table 3	Instrumentation and Safety System Functions in Centralized Control Station – Medium and High Speed (Trunk Piston) Diesel Engines	To require turbocharger speed alarm for Categories B and C turbochargers, in line with IACS UR M35 rev. 7 Mar. 2016. (Incorporates Notice No. 1)
4-9-3/Table 5B	Instrumentation and Safety System Functions in Centralized Control Station – Generator Prime Mover for Electric Propulsion	To require turbocharger speed alarm for Categories B and C turbochargers, in line with IACS UR M35 rev. 7 Mar. 2016. (Incorporates Notice No. 1)
4-9-6/Table 6	Instrumentation and Safety System Functions in Centralized Control Station – Auxiliary Turbines and Diesel Engines	To require turbocharger speed alarm for Categories B and C turbochargers, in line with IACS UR M35 rev. 7 Mar. 2016. (Incorporates Notice No. 1)

EFFECTIVE DATE 1 January 2018 – shown as (2018)
(based on the contract date for new construction between builder and Owner)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 3 Hull Construction and Equipment		
3-1-1/3	Length	To align the requirements with ICLL 1966/Reg. 3 & IACS UR S2.
3-1-1/11.1	Freeboard Deck	To align the requirements with ICLL 1966/Reg. 3 & IACS UR S2.
3-2-8/7.3	Lower Rudder Stocks	To make the stress units consistent with the allowable stress.
3-2-8/Figure 4	Tapered Couplings	To be consistent with the requirements of 3-2-8/11.7.
3-2-8/17.5	Diaphragm Plates	To allow larger openings on diaphragm plates when the effects of openings are considered in the strength assessment.
3-3-A2 (Title)	Computer Software for Onboard Stability Calculations	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/5	Types of Stability Software	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/7.1	Calculation Program	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/7.5	Warning	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/7.15 (New)	Computer Model	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/7.17 (New)	Further Requirements for Type 4 Stability Software	To align the Rules with IACS UR L5, Revision 3.

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
3-3-A2/Table 1	Acceptable Tolerances	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/11.1	Conditions of Approval of the Onboard Software for Stability Calculations	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/11.5	Specific Approval	To align the Rules with IACS UR L5, Revision 3.
3-3-A2/15	Installation Testing	To align the Rules with IACS UR L5, Revision 3.
3-6-1	Tank, Bulkhead and Rudder Tightness Testing	To reflect the comments from Administrations, Industry Organizations and IMO considered during review of the proposed Testing Guidelines associated with SOLAS Chapter II-1, Regulation 11, reflected in IACS UR S14 (Rev.6, Sept 2016).
PART 4		
Craft Systems and Machinery		
4-3-1/5.13	Alternative Gear Rating Standards	To refer to the latest edition of the standards.
4-4-1/9.3.2	Diameter Over 457 mm (18 in.)	To clarify that the diameter is the inside diameter.
4-4-1/9.3.3	Diameter Over 305 mm (12 in.)	To clarify that the diameter is the inside diameter.
4-4-1/9.3.4	Diameter 305 mm (12 in.) or Less	To clarify that the diameter is the inside diameter.
4-6-4/5.7.4(c)	Sludge Piping	To align the requirement with Regulation 12 of MARPOL Annex 1, as amended by Resolution MEPC. 266(68).
4-6-4/9.5.7 (New)	Fuel Oil Overflow	To align the requirements with ABS practice.
4-6-5/17 (New)	Storage and Use of SCR Reductants	To provide requirements for Selective Catalytic Reduction (SCR) systems, in line with IACS UR M77 Sept. 2016.
4-6-7/3.5.4	Accumulators	To clarify the requirements for accumulators of extruded seamless construction.
4-7-3/23.3.1(f)i)	<No Title>	To clarify the acceptability for individually identifiable fire detectors without individual short circuit isolator, in line with 2.1.6.1 of FSS Code in IMO Resolution MSC.311(88)
4-7-3/25.1.3	Distribution Piping and Nozzles	To clarify the requirements for the pressure rating of the distribution pipe.
4-7-3/25.1.6	Medium Release Warning Alarm	To align the requirements with IACS UI SC132 (Rev.4).
4-8-2/5.3.1	General	To explicitly prohibit the installation of other unrelated equipment in the emergency generator room.
4-8-2/7.11.1(d)	Current Carrying Capacity Correction	To clarify the application of the reduction factor of 0.85 where more than six cables are expected to operate simultaneously and are laid close together in a bunch in such a way that are an absence of free air circulation around them.
4-8-2/7.17.1	Main Lighting System	To align the requirement with other ABS Rules.
4-8-3/5.5.2(e)	Clearance and Creepage	To align the requirement with IEC 60092-302 and IEC 61892-3.
4-8-3/Table 2	Minimum Degree of Protection	To permit plugs and socket outlets installed in hazardous areas, in line with IEC 61892-7 Para. 8.11.1 and IEC 60079-14 Para. 5.13.
4-8-3/Table 5	Equipment and Instrumentation for Switchboards	To provide a reference to the requirements for high voltage systems.
4-8-3/Table 6	Maximum Current Carrying Capacity for Cables	To clarify the application of the reduction factor of 0.85 where more than six cables are expected to operate simultaneously and are laid close together in a bunch in such a way that are an absence of free air circulation around them.
4-8-4/19.3	Cable Current Carrying Capacity	To clarify the application of the reduction factor of 0.85 where more than six cables are expected to operate simultaneously and are laid close together in a bunch in such a way that are an absence of free air circulation around them.
4-8-5/3.3.2	Earth Fault Detection and Indication	To clarify the requirements for audible and visual indication of earth faults for high voltage systems.
4-9-1/5.3.5 (New)	Worst Case Execution Time (WCET)	To define terms used in 4-9-1/7.3.9, in line with ISO 17894:2005 and IEC 61508-3.

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-9-1/5.3.6 (New)	Worst Case Response Time (WCRT)	To define terms used in 4-9-1/7.3.9, in line with ISO 17894:2005 and IEC 61508-3.
4-9-1/7.3.12	Programmable Electronic System (PES)	To mitigate the danger of critical alarms missing their deadlines.
4-9-1/9.7.2	Audible Alarms	To require a visual alarm for cases where the audible alarm may not be heard due to high noise levels in the machinery space.
4-9-3/19.3.1	Bilge Level	To clarify the number of bilge level switches/sensors required for vessels with ACC or ACCU notation, in line with IAC UR M27.
4-9-3/21.5vi)	<No Title>	To require that weathertight doors fitted in the engine casing bulkhead also be a type of self-closing door or could be closed from fire control station, to prevent the release of CO ₂ from the unintentional remaining opened doors when fixed CO ₂ system in engine room is active, and to align the requirements for a high-expansion foam fire extinguishing system with IACS UI SC262.
4-9-3/21.7.1ii) (New)	Emergency Generator Spaces	To align the requirements with ABS practice.