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THÔNG BÁO KỸ THUẬT TÀU BIỂN

TECHNICAL INFORMATION ON SEA-GOING SHIPS

Ngày 15 tháng 12 năm 2014
Số thông báo: 025TI/14TB

Nội dung: Thực hiện Bộ luật quốc tế về vận chuyển xô hàng rời rắn bằng đường biển sửa đổi (Bộ luật IMSBC phiên bản 2014).

Kính gửi: Các Chủ tàu/ Công ty quản lý tàu
Các Chi cục Đăng kiểm tàu biển

Bộ luật IMSBC phiên bản 2014 đã được Ủy ban An toàn Hàng hải của IMO thông qua tại kỳ họp lần thứ 92 bằng Nghị quyết MSC.354(92) ngày 23/06/2013. Bộ luật IMSBC phiên bản 2014 sẽ chính thức có hiệu lực từ ngày 01/01/2015 và đưa ra các yêu cầu bắt buộc đối với tất cả các tàu chở xô hàng rời rắn.

Cục Đăng kiểm Việt nam xin thông báo một số nội dung liên quan đến Bộ luật IMSBC phiên bản 2014 như sau:

1. Bộ luật IMSBC phiên bản 2014 bổ sung một số loại hàng mới và bổ sung yêu cầu về kết cấu và trang thiết bị đối với một số loại hàng (Liệt kê trong Bảng G1 đính kèm).

2. Bộ luật IMSBC phiên bản 2014 bổ sung một số loại hàng được miễn giảm trang bị hệ thống dập cháy cố định sử dụng khí:

-METAL SULPHIDE CONCENTRATES (Low fire-risk)
-ALUMINA HYDRATE
-CLINKER ASH, WET
-COAL TAR PITCH
-GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT)

Nếu tàu xếp các loại hàng này, chủ tàu/ công ty quản lý tàu phải thông báo cho Cục Đăng kiểm Việt Nam để bổ sung tên các loại hàng trong danh sách hàng đính kèm Giấy chứng nhận miễn giảm.

3. Bộ luật IMSBC phiên bản 2014 bổ sung các yêu cầu về kết cấu và trang bị đối với "Ammonium Nitrate":

Bổ sung yêu cầu đối với thiết bị hâm két nhiên liệu có hiệu lực từ ngày 01/01/2015 áp dụng cho các loại hàng: Ammonium Nitrate (IMO Class 5.1, UN 1942), Ammonium Nitrate Based Fertilizer (Type A) (IMO Class 5.1, UN 2067), Ammonium Nitrate Based Fertilizer (Type B) (IMO Class 9, UN 2071) và Ammonium Nitrate Based Fertilizer (non-hazardous) như sau:

a) Đối với Ammonium Nitrate (IMO Class 5.1, UN 1942) yêu cầu phải có thiết bị ngắt hệ thống hâm dẫn đến két nhiên liệu (FOT) liền kề không gian chở hàng. Việc ngắt phải sử dụng các bích đặc.

b) Đối với Ammonium Nitrate Based Fertilizer (Type A) (IMO Class 5.1, UN 2067), Ammonium Nitrate Based Fertilizer (Type B) (IMO Class 9, UN 2071) và Ammonium Nitrate Based Fertilizer (non-hazardous) yêu cầu phải có biện pháp theo dõi và kiểm soát để đảm bảo nhiệt độ vách biên giữa két nhiên liệu và không gian chở hàng không vượt quá 50^{o}C. Trong trường hợp này thiết bị ngắt hệ thống hâm dẫn đến két nhiên liệu (về nguyên tắc là bích đặc) sẽ là một biện pháp thay thế.

Từ sau ngày 01/01/2015 các thiết bị này phải được lắp cho tàu trước khi tàu nhận các loại hàng "Ammonium Nitrate".

4. Việc kiểm tra và cấp lại Giấy chứng nhận IMSBC cho các tàu như sau:

a) Đối với các hàng liệt kê trong Bảng 1 là Nhóm A và Nhóm C trừ Ammonium Nitrate Based Fertilizer (non-hazardous): Nếu Phụ bản của Giấy chứng nhận IMSBC hiện tại của tàu liệt kê tất cả các loại hàng Nhóm A và Nhóm C trừ Ammonium Nitrate Based Fertilizer (non-hazardous) thì Giấy chứng nhận này được coi là phù hợp Bộ luật IMSBC phiên bản 2014 và không cần phải cấp lại.

b) Đối với các hàng liệt kê trong Bảng 1 là Nhóm B, Nhóm A và B trừ các loại hàng nêu ở mục 3 trên: đề nghị chủ tàu/ công ty quản lý tàu liên hệ với Chi cục đăng kiểm để thực hiện kiểm tra tàu phù hợp với các yêu cầu cho từng loại hàng hóa được liệt kê Bảng 1 tại đợt kiểm tra chu kỳ đầu tiên sau ngày 01/01/2015 và cấp lại giấy chứng nhận IMSBC cho tàu.

c) Đối với các loại hàng "Ammonium Nitrate" nêu tại mục 3 trên:

(i) Nếu tàu dự định chở các hàng nêu tại mục 3 từ ngày 01/01/2015, đề nghị chủ tàu/ công ty quản lý tàu gửi các bản vẽ sau đây cho phòng Quy phạm để thẩm định:

- Bản vẽ sơ đồ đường ống hâm két nhiên liệu có chỉ rõ bố trí thiết bị ngắt

- Tài liệu liên quan đến hệ thống điều khiển và kiểm soát nhiệt độ bao gồm cả các vị trí bố trí thiết bị.

Căn cứ hồ sơ thiết kế được thẩm định, đề nghị chủ tàu/ công ty quản lý tàu liên hệ với Chi cục đăng kiểm để thực hiện kiểm tra và cấp lại Giấy chứng nhận IMSBC cho tàu.

(ii) Nếu tàu không dự định chở hàng nêu tại mục 3 kể từ ngày 01/01/2015, đề nghị chủ tàu, công ty quản lý tàu gửi văn bản tới phòng Tàu biển để gạch bỏ các loại hàng này trong Phụ bản các Giấy chứng nhận IMSBC và Giấy chứng nhận phù hợp chở hàng nguy hiểm (DG) và cấp lại các giấy chứng nhận này cho tàu.

Thông báo kỹ thuật này được nêu trong mục: *Thông báo của VR/ Thông báo kỹ thuật TB* của trang tin điện tử Cục Đăng kiểm Việt Nam: *http://www.vr.org.vn*.

Nếu Quý cơ quan cần thêm thông tin về vấn đề nêu trên, đề nghị vui lòng liên hệ:

Cục Đăng kiểm Việt Nam,
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Xin gửi đến các Quý Đơn vị lời chào trân trọng./.

Nơi nhận:
-Như trên;
-QP, CN, CTB, VRQC, TTTH;
-Lưu TB./.

Table 1.1

Requirements of construction and equipment for individual cargoes
under the provisions of the IMSBC Code (2014 Edition) and SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
ALFALFA			C																			
ALUMINA			C																			
ALUMINA, CALCINED			C																			
ALUMINA HYDRATE	MHB		A and B				Y	Y														
ALUMINA SILICA			C																			
ALUMINA SILICA, pellets			C																			
ALUMINIUM FERROSILICON POWDER	4.3	1395	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X	
ALUMINIUM NITRATE	5.1	1438	B				Y	Y			Y	Y		X	X				X	X		(Yes)
ALUMINIUM SILICON POWDER, UNCOATED	4.3	1398	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X	
ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS	4.3	3170	B	A, G	Y	ML,Sa	Y			IICT2						X	X	X	X	X	X	
ALUMINIUM SMELTING / REMELTING BY-PRODUCTS, PROCESSED	MHB		A and B	G	Y	ML			F													Yes
AMMONIUM NITRATE	5.1	1942	B	A	Y		Y	Y		IS		Y	N1	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE BASED FERTILIZER (Type A)	5.1	2067	B	A	Y		Y	Y		IS		Y	N1 or N2	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE BASED FERTILIZER (Type B)	9	2071	B	A	Y		Y	Y		IS		Y	N1 or N2	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)			C	A	Y		Y	Y		IS		Y	N1 or N2									
AMMONIUM SULPHATE			C																			
ANTIMONY ORE AND RESIDUE			C																			
BARIUM NITRATE	5.1	1446	B			Nm	Y	Y			Y	Y		X	X				X	X		(Yes)
BARYTES			C																			
BAUXITE			C																			
BIOSLUDGE			**C**																			
BORAX (PENTAHYDRATE CRUDE)			C																			
BORAX**,** ANHYDROUS, crude or refined			C																			
BROWN COAL BRIQUETTES	MHB		B	See Table 1.3																		
CALCIUM NITRATE	5.1	1454	B				Y	Y			Y	Y		X	X				X	X		(Yes)
CALCIUM NITRATE FERTILIZER			C																			
CARBORUNDUM			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
CASTOR BEANS [1]	9	2969	B			Nm	Y	Y			Y			X	X				X	X		Yes
CEMENT			C																			
CEMENT CLINKERS			C																			
CEMENT COPPER			A																			
CHAMOTTE			C																			
CHARCOAL	MHB		B																			Yes
CHOPPED RUBBER AND PLASTIC INSULATION			C																			Yes [2]
CHROME PELLETS			C																			
CHROMITE ORE			C																			
CLAY			C																			
CLINKER ASH, WET	MHB		A and B					Y														
COAL	MHB		A and B	See Table 1.3																		
COAL SLURRY			A			N																
COAL TAR PITCH	MHB		B					Y														
COARSE CHOPPED TYRES			C																			Yes [2]
COARSE IRON AND STEEL SLAG AND ITS MIXTURE			C																			
COKE			C																			
COKE BREEZE			A																			
COLEMANITE			C																			
COPPER CONCENTRATE			A																			
COPPER GRANULES			C																			
COPPER MATTE			C																			
COPRA (dry)	4.2	1363	B	A	Y	Nm								X	X				X	X	X	Yes
CRUSHED CARBON ANODES			C																			
CRYOLITE			C																			
DIAMMONIUM PHOSPHATE (D.A.P.)			C																			
DIRECT REDUCED IRON, (A) Briquettes, hot-moulded	MHB		B	F	Y	Nm, Sp				IICT2												
DIRECT REDUCED IRON, (B) Lumps, pellets, cold moulded briquettes 3	MHB		B	F	Y					IICT2												Yes
DIRECT REDUCED IRON, (C) (By product fines) 3	MHB		B	F	Y		Y			IICT2												Yes
DOLOMITE			C																			
DISTILLERS DRIED GRAINS WITH SOLUBLES			C																			
FELSPAR LUMP			C																			
FERROCHROME			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
FERROCHROME, exothermic			C																			
FERROMANGANESE			C																			
FERRONICKEL			C																			
FERROPHOSPHORUS (including briquettes)	MHB		B			ML, Sa	Y			IICT1												
FERROSILICON with 30% or more but less than 90% silicon (including briquettes)	4.3	1408	B	A, G	Y	ML,Sa	Y	Y	F,N	IICT1						X	X	X	X	X	X	
FERROSILICON 25% to 30% silicon, or 90% or more with silicon (including briquettes)	MHB		B	G	Y	ML,Sa	Y		F,N	IICT1												
FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS	4.2	2793	B	A	Y		Y							X	X				X	X	X	Yes
FERROUS SULPHATE HEPTAHYDRATE			C																			
FERTILIZERS WITHOUT NITRATES (non-hazardous)			C																			
FISH (IN BULK)			A																			
FISHMEAL (FISHSCRAP), STABILIZED	9	2216	B			Nm	Y							X	X				X	X		Yes
FLUORSPAR	MHB		A and B																			
FLY ASH, DRY			C																			
FLY ASH, WET			A																			
GRAIN SCREENING PELLETS			C																			
GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT)	MHB		B				Y	Y														
GRANULAR FERROUS SULPHATE			C																			
GRANULATED SLAG			C																			
GRANULATED TYPE RUBBER			C																			Yes [2]
GYPSUM			C																			
GYPSUM GRANULATED			C																			
ILMENITE (ROCK)			C																			
ILMENITE (UPGRADED)			A																			
ILMENITE CLAY			A																			
ILMENITE SAND			C																			
IRON ORE			C																			
IRON ORE PELLETS			C																			
IRON OXIDE, SPENT or IRON SPONGE, SPENT	4.2	1376	B	A		Nm	Y	Y		IIAT2	Y			X	X				X	X	X	Yes
IRONSTONE			C																			
LABRADORITE			C																			
LEAD NITRATE	5.1	1469	B			N	Y	Y			Y	Y		X	X				X	X		(Yes)
LEAD ORE			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
LIME (UNSLAKED)	MHB		B																			
LIMESTONE			C																			
LINTED COTTON SEED	MHB		B				Y															Yes
MAGNESIA (DEADBURNED)			C																			
MAGNESIA (UNSLAKED)	MHB		B																			
MAGNESITE, natural			C																			
MAGNESIUM NITRATE	5.1	1474	B				Y	Y			Y	Y		X	X				X	X		(Yes)
MAGNESIUM SULPHATE FERTILIZERS			C																			
MANGANESE ORE			C																			
MARBLE CHIPS			C																			
METAL SULPHIDE CONCENTRATES	MHB		A and B				Y															Yes [9]
Mineral Concentrates			A																			
MONOAMMONIUM PHOSPHATE (M.A.P.)			C																			
NICKEL ORE			A																			
PEANUTS (in shell)			C	A																		
PEAT MOSS	MHB		A and B			Nm																
PEBBLES (sea)			C																			
PELLETS (concentrates)			C																			
PERLITE ROCK			C																			
PETROLEUM COKE, calcined or uncalcined	MHB		B				Y	Y			Y											
PHOSPHATE, defluorinated			C																			
PHOSPHATE ROCK, calcined			C																			
PHOSPHATE ROCK, uncalcined			C																			
PIG IRON			C																			
PITCH PRILL	MHB		B			Nm	Y	Y			Y											
POTASH			C																			
POTASSIUM CHLORIDE			C																			
POTASSIUM NITRATE	5.1	1486	B				Y	Y			Y	Y		X	X				X	X		(Yes)
POTASSIUM SULPHATE			C																			
PUMICE			C																			
PYRITE (containing copper and iron)			C																			
PYRITES, CALCINED (Calcined Pyrites)	MHB		A and B																			
PYROPHYLLITE			C																			
QUARTZ			C																			
QUARTZITE			C																			
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-1)	7	2912	B				Y	Y														

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-1)	7	2913	B				Y	Y														
RASORITE (ANHYDROUS)			C																			
RUTILE SAND			C																			
SALT			C																			
SALT CAKE			C																			
SALT ROCK			C																			
SAND			C	A [4]																		
SAND, HEAVY MINERAL			A																			
SAWDUST	MHB		B			Nm																Yes
SCRAP METAL			C			Nm																
SEED CAKE Type (a)	4.2	1386	B	A			Y							X	X				X	X	X	Yes
SEED CAKE Type (b)	4.2	1386	B	A [5]	Y	Nm, Sp	Y			IIAT3 [5]				X	X	X[5]	X[5]	X[5]	X	X	X	Yes
SEED CAKE	4.2	2217	B	A	Y	Nm, Sp	Y			IIAT3				X	X	X	X	X	X	X	X	Yes
SEED CAKE (non-hazardous)			C																			
SILICOMANGANESE (low carbon)	MHB		B		Y	M, Sa	Y			IICT1												
SILICON SLAG			C																			
SODA ASH			C																			
SODIUM NITRATE	5.1	1498	B				Y	Y			Y	Y		X	X				X	X		(Yes)
SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE	5.1	1499	B				Y	Y			Y	Y		X	X				X	X		(Yes)
SOLIDIFIED FUELS RECYCLED FROM PAPER AND PLASTICS	MHB		B					Y														Yes
STAINLESS STEEL GRINDING DUST			C																			
STONE CHIPPINGS			C																			
SUGAR			C																			
SULPHATE OF POTASH AND MAGNESIUM			C																			
SULPHUR (crushed lump and coarse grained) [6]	4.1	1350	B	A	Y	Nm, Sp	Y			IIAT4				X	X	X		X[8]	X	X	X	
SULPHUR (formed, solid)			C			Nm																
SUPERPHOSPHATE			C																			
SUPERPHOSPHATE (triple, granular)			C																			
TACONITE PELLETS			C																			
TALC			C																			
TANKAGE	MHB		B				Y															Yes
TAPIOCA			C																			
UREA			C																			
VANADIUM ORE	MHB		B				Y															
VERMICULITE			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
WHITE QUARTZ			C																			
WOODCHIPS	MHB		B				Y															Yes [7]
WOOD PELLETS	MHB		B				Y															Yes
WOOD PRODUCTS - GENERAL	MHB		B			Nm	Y															
WOOD TORREFIED	MHB		B				Y															Yes
ZINC ASHES	4.3	1435	B	A	Y	ML,Sa	Y	Y		IICT2						X	X	X	X	X	X	
ZIRCONSAND			C																			

The contents of each column in the Table 4.1 are as follows.

1. CARGOES (column “a”)

   Bulk Cargo Shipping Names are expressed in capital letters and identifies a bulk cargo during transport by sea.

2. IMO class (column “b”)

   Group B cargoes are categorized into the following classes.

   Class 4.1 : Flammable solids
   Class 4.2 : Substances liable to spontaneous combustion
   Class 4.3 : Substances which, in contact with water, emit flammable gases
   Class 5.1 : Oxidizing substances (agents)
   Class 7 : Radioactive materials
   Class 9 : Miscellaneous dangerous substances and articles
   MHB : Materials which may possess chemical hazards when transported in bulk other than materials classified as dangerous goods in the IMDG Code.

3. UN No. (column “c”)

   This is a 4-digit number assigned to a particular dangerous substance included in the dangerous substance list (approximately 3,000 items) within the United Nations Recommendations on the Transport of Dangerous Goods issued by the Unite Nations Committee of Experts on the Transport of Dangerous Goods.

4. Group (column “d”)

   A : Group A consists of cargoes which may liquefy if shipped at moisture content in excess of their transportable moisture limit.
   B : Group B consists of cargoes which possess a chemical hazard which could give rise to a dangerous situation on a ship.
   C : Group C consists of cargoes which are neither liable to liquefy (Group A) nor to possess chemical hazards (Group B).

5. Stowage (column “e”)

   A : Bulkheads to the engine room are to be insulated to A-60 standard.
   F : Boundaries of components are to be resistant to fire and passage of water.
   G : Bulkheads to the engine room are to be of gastight.

6. NO SMOKING sign (column “f”)

   Y : “NO SMOKING” signs are to be posted on decks and in areas adjacent to cargo compartments.

7. Ventilation (column “g”)

   N : Natural ventilation system is to be provided for cargo holds.
   Nm : Natural or mechanical ventilation system is to be provided for cargo holds.
   M : Mechanical ventilation system is to be provided for cargo holds.
   ML : At least two mechanical ventilation fans are to be provided for cargo holds. The total ventilation is to be at least six air changes per hour. Ventilation openings are to comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure.
   Sa : Ventilation fans are to be safe for use in a flammable atmosphere.
   Sp : Spark-arresting screens (wire mesh guards with max. 13mm X 13mm) are to be fitted to ventilation openings.

8. SCBA (column “h”)

   Y : Two self contained breathing apparatuses with 200% spare cylinders are to be additionally provided.

9. Protective clothing resistant to chemical attack (column “i”)

   Y : Four sets of protective clothing which consists of a pair of gloves, boots, a protective clothing and helmet with goggles are to be additionally provided.

10. Bilge line (column “j”)

    F : In case where bilge lines are led to machinery space, bilge line is to be isolated either by fitting a blank flange or by a closed lockable valve.

N : A notice is to be placed adjacent to the valve warning against opening without the master's permission.

11. Electrical equipment (column "k")

Not suitable explosion protected type electrical equipment are to be disconnected (by removal of links in the system, other than fuses) from the power source at a point external to the space.

IIAT2: Electrical equipment having an explosion protection grade of IIAT2 or upwards are considered as suitable explosion protected type electrical equipment.

IIAT3: Electrical equipment having an explosion protection grade of IIAT3 or upwards are considered as suitable explosion protected type electrical equipment.

IIAT4: Electrical equipment having an explosion protection grade of IIAT4 or upwards are considered as suitable explosion protected type electrical equipment.

IICT1: Electrical equipment having an explosion protection grade of IICT1 or upwards are considered as suitable explosion protected type electrical equipment.

IICT2: Electrical equipment having an explosion protection grade of IICT2 or upwards are considered as suitable explosion protected type electrical equipment.

IS: Intrinsically safe type electrical equipment are considered as suitable explosion protected type electrical equipment.

12. Dual purpose nozzles (column "l")

Y : Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).

13. 4 jets of water (column "m")

Y : The quantity of water delivered is to be capable of supplying four nozzles at pressure as specified in SOLAS regulation and being trained on any part of the cargo space when empty.

14. Heating Arrangement (column "n")

N1 : The means to disconnect heating arrangements for the tank(s) are to be provided.

N2 : The means to monitor and control the temperature of boundary between the tank(s) and cargo space loading the cargo so that it does not exceed 50°C are to be provided.

15. Requirements of SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments) (column "n" ～ "u")

X : Applicable.

16. FFEA (SOLAS Reg.II-2/10.7.1.3) (column "v")

Yes : Fixed CO2 fire extinguishing system for cargo holds are required by SOLAS Reg.II-2/10.7.1.3.

(Yes): Fixed gas fire-extinguishing system is ineffective and for which a fixed fire-extinguishing system giving equivalent protection shall be available. According to the Unified Interpretation of IMO, water supplies defined in SOLAS Reg.II-2/19.3.1.2 are considered as the alternative of a fixed gas fire-extinguishing system in cargo spaces.

General notes:

- For the detailed requirements of the IMSBC Code, the relevant part of the Code should be referred to.
- The application of the requirements of SOLAS Reg.II-2/54.2 or 19.3 is shown just for ready reference. For the detailed requirements, the relevant part of the SOLAS should be referred to.
- Blank columns mean "Not applicable".

Notes : 1. CASTER MEAL, CASTER POMACE and CASTER FLAKE shall not be carried in bulk.

2. For the planned voyage not exceeding 5 days from the commencement of loading to the completion of discharge, the vessel may be exempted from the requirements of FFEA.
3. Consideration shall be given to providing the vessel with the means to top up the cargo spaces with additional supplies of inert gas taking into account the duration of the voyage. The ship's fixed CO2 fire extinguishing system shall not be used for this purpose.
4. Only applicable to Industrial sand coated with resin.
5. Only applicable to Seedcake containing solvent extractions only.
6. Fine grained sulphur (flowers of sulphur) shall not be transported in bulk.
7. With moisture content of 15% or more, the vessel may be exempted from the requirements of FFEA.
8. Only suitable wire mesh guards are required.
9. Except Metal Sulphide Concentrate considered as presenting a low fire-risk.

Table 1.4

Documents/information to be submitted

Required items (1) Column of Table 4.2 (1)	(2)	(2) Regulation of SOLAS II-2/54 (II-2/19)	Documents/information to be submitted The meanings of "H" and "L" are specified under this table.	
e	2.8 (3.8)	"A-60" class insulation of bulkheads between the cargo space and engine room	H	Drawings of fire protection construction Type and manufacture of the material
f	--	"NO SMOKING" signs	L	Number and locations of the signs
g	--	Natural ventilation.	H	Drawings of the system
	2.4.3 (3.4.3)	Natural or mechanical ventilation.		
	--	Mechanical ventilation		
	2.4.1 (3.4.1)	Mechanical ventilation (total ventilation at least six air changes per hour)	H	Drawings of the system Calculations of the air changes
	2.4.2 (3.4.2)	Non-sparking fans	L	Specifications
		Spark-arresting screens (wire mesh guard)	L	Specifications
h	2.6.2 (3.6.2)	Self-contained breathing apparatus	L	Type, manufacturer and specifications
i	2.6.1 (3.6.1)	Protective clothing resistant to chemicals		
j	--	Stop valves and blank flanges on the bilge lines on machinery space side	H	Drawing of bilge lines
k	2.2 (3.2)	Electrical equipment to be of safe type.	H	Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment.
l	-	Jet/spray dual purpose type nozzle	L	Type, manufacturer and specifications
m	2.1.2 (3.1.2)	Capacity of fire pumps to supply four nozzles	H	Fire main piping diagram with arrangement of hydrant and pump capacity.
n	-	Heating arrangement	H	Drawing of heating arrangement. Drawing of the system for measuring and monitoring temperature.

H: To be submitted to Material and Equipment department for examination by the Head office.

L: To be submitted to the local office for their checking.

Table 1.5

Documents/information to be submitted for COAL/BROWN COAL BRIQUETTES

Requirements on Table 2.3	Documents/information to be submitted The meaning of "L" is specified under this table	
Boundaries of cargo spaces should be resistant to fire and liquids.	—	—
Electrical cables and components situated in cargo spaces and adjacent spaces should be free from defects and safe for use in explosive atmosphere or positively isolated.	L	Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment, such as IIAT4.
Appropriate instruments for measuring followings into cargo spaces without entry into such spaces should be provided. Methane Oxygen Carbon monoxide pH value Temperature(0 - 100ºC)	L	Type, manufacturer and specifications
Two sets of self-contained breathing apparatus to be provided.	L	Type, manufacturer and specifications
"No Smoking" sign and "No naked flames" sign should be posted in conspicuous places.	L	Number and locations of the signs
Natural surface ventilation should be provided for cargo spaces.	L	Drawings of the ventilation systems Arrangement of air holes
Natural or mechanical ventilation should be provided for enclosed working spaces, such as store rooms, carpenter's shops, passage ways, tunnels. Mechanical ventilation, if used, should be of safe type for use in explosive atmosphere.	L	Drawings of the system
Two sampling holes per hold, one on each side of the hatch cover should be provided with threaded stub and sealing cap.	L	Drawings of the system

L: To be submitted to the local office for their checking.

Table G1 - Cargoes newly added and Cargoes for which requirements on construction/equipment are added (IMSBC Code(2014 Edition))

Revised points are shown in red.

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
AMMONIUM NITRATE	5.1	1942	B	A	Yes		Yes	Yes		IS		Yes	N1	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE-BASED FERTILIZER	5.1	2067	B	A	Yes		Yes	Yes		IS		Yes	N1 or N2	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE-BASED FERTILIZER	9	2071	B	A	Yes		Yes	Yes		IS		Yes	N1 or N2	X	X	X		X[8]	X	X	X	(Yes)
AMMONIUM NITRATE-BASED FERTILIZER (non-hazardous)			C	A	Yes		Yes	Yes		IS		Yes	N1 or N2									
ALUMINA HYDRATE	MHB		A and B				Yes	Yes														
ALUMINIUM SMELTING / REMELTING BY-PRODUCTS, PROCESSED	MHB		A and B	G	Y	ML			F													Yes
CLINKER ASH, WET	MHB		A and B					Yes														

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
COAL TAR PITCH	MHB		B					Yes														
COARSE IRON AND STEEL SLAG AND ITS MIXTURE			C																			
CRUSHED CARBON ANODES			C																			
GRAIN SCREENING PELLETS			C																			
GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT)	MHB		B				Yes	Yes														
GYPSUM GRANULATED			C																			
ILMENITE (ROCK)			C																			
ILMENITE (UPGRADED)			A																			
METAL SULPHIDE CONCENTRATES	MHB		A and B				Yes															Yes[9]
NICKEL ORE			A																			
SAND, HEAVY MINERAL			A																			
SILICON SLAG			C																			

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
CARGOES	IMO class	UN No.	Group	Stowage	NO SMOKING sign	Ventilation	SCBA	Protective clothing	Bilge line	Explosion protected electrical equipment	Dual purpose nozzles	4 jets of water	Heating arrangement	SOLAS Reg.II-2/54.2 or 19.3								FFEA (SOLAS Reg.II-2/10.7.1.3)
														Remote control of fire pump	4 jets of water	Explosion protected electrical equipment	Mechanical ventilation	Safe type fan	Natural ventilation	Personnel protection	A-60 insulation	
SOLIDIFIED FUELS RECYCLED FROM PAPER AND PLASTICS	MHB		B					Yes														Yes
WOOD TORREFIED	MHB		B				Yes															Yes