**CCC 6 – 9th to 13th September 2019**

The Sub-Committee on Carriage of Cargoes and Containers held its sixth session from 9 to 13 September 2019 (CCC 6).

***Amendments to the IGF code and development of guidelines for low-flashpoint fuels***

CCC 5 had re-established the Correspondence Group on Development of Technical Provisions for the Safety of Ships using Low-flashpoint Fuels, to continue the work on the draft Interim guidelines on fuel cells and the consideration on low-flashpoint oil fuels.

Due to time constraints, CCC 6 could not finalize the draft Interim guidelines on fuel cells and agreed to include this work item in the draft terms of reference of the correspondence group.

Number of delegations estimated that the A-60 class division for fuel cell spaces, which included fuel cell enclosures, could be an excessive requirement, particularly if such fuel cell spaces were adjacent to water ballast tanks, voids etc.

***Fuel cell enclosure***

A fuel cell enclosure could be relatively small and an A-60 class division would be difficult to design, particularly if additional piping, valve and other appendages were to be included. It was considered that it would be preferable to allow for the room containing the fuel cell space to be insulated to an A-60 class division standard instead.

Hence, CCC 6 agreed to allow alternative designs where A-60 class divisions were deemed impracticable.

CCC 6 agreed that fuel cell spaces should be arranged outside of accommodation spaces, service spaces, machinery spaces of category A and control stations.

***Area classification***

In considering the hazardous area categorization, CCC 6 discussed the two concepts available for an area classification:

* The proposed prescriptive provisions in 4.2.2
* Classification according to standard IEC 60079-10.

The Sub-Committee agreed that a hazardous zone designation in accordance with 4.2.2 of the draft Interim guidelines would be the default step and, if considered inappropriate for the individual design, calculation according to IEC 60079-10 should be applied with special consideration by the Administration.

***Safety provisions regarding low-flashpoint fuel oils***

CCC 6 had for its consideration a FSA study on safety-related issues for the potential use of low-flashpoint oil fuels as a marine fuel as well as draft amendments to the IGF Code to regulate the use of such fuels.

Many delegates expressed concerns regarding the outcome of the FSA study, questioning its boundary conditions, in particular the 45°C engine room temperature which, in hotter climates, could well be exceeded; sound research of real-world conditions were considered still outstanding.

Some delegations cautioned prioritizing this work to aid in the implementation of the 2020 Sulphur limit and highlighted that expanding the scope of the available fuel oil grades to meet the 2020 demand should be done considering all related safety aspects before any new provisions were agreed.

In this context, CCC 6 agreed that, at this stage, it is premature to decide whether the safety provisions should be a new chapter in the IGF Code or guidelines.

It agreed to task a Correspondence Group to develop amendments to the IGF Code to address safety provisions for low-flashpoint oil fuels.

***Development of safety provisions for ships using LPG fuels***

CCC 6 agreed to the need to develop safety provisions for ships using LPG fuels, as a number of shipowners had already sought clarification on the safety requirements from their Administrations in this respect.

It tasked the intersessional correspondence group to consider this topic.

***Amendments to the IGC and IGF codes to include high manganese austenitic steel and related guidance for approving alternative metallic material for cryogenic service***

Guidelines for the acceptance of alternative metallic materials for cryogenic service in ships carrying liquefied gases in bulk and ships using gases or other low-flashpoint fuels

CCC 5 decided to expand the output on "Suitability of high manganese austenitic steel for cryogenic service and development of any necessary amendments to the IGC and IGF Codes" to include related guidance for approving alternative metallic material for cryogenic service.

CCC 5 instructed the Correspondence Group to develop guidance on the procedure for considering and approving alternative metallic material for cryogenic service and to gather and evaluate information and data.

CCC 6 have agreed to the draft Guidelines for the acceptance of alternative metallic materials for cryogenic service in ships carrying liquefied gases in bulk and ships using gases or other low-flashpoint fuels, and the associated draft MSC circular, with a view to approval by MSC 102.

The Guidelines provide detailed guidance on how to document alternative metallic materials for their suitability and compliance with the IGC and IGF Codes, and a framework for evaluation and approval of alternative metallic materials for cryogenic service.

The requirements for metallic materials used in low temperature applications on board ships constructed in accordance with the IGC and IGF Codes are contained in tables 6.2, 6.3 and 6.4 of the IGC Code and tables 7.2, 7.3 and 7.4 of the IGF Code, respectively.

The requirements are identical in both Codes and specify the minimum design temperatures for specific materials based upon chemical composition, mechanical properties and heat treatment. These approved materials have been incorporated in the Codes since their inception and have provided over 40 years of satisfactory service experience.

There is recent interest in adding new metallic materials to the list of those already covered by the Codes. Interim guidelines on the application of high manganese austenitic steel for cryogenic service were adopted and disseminated as MSC.1/Circ.1599. In the process of developing the Interim guidelines, significant experience in the evaluation of this alternative material was acquired. The recommendations contained in MSC.1/Circ.1599 are used as the basis for these Guidelines.

It was also agreed that service experience requirements applied to high manganese austenitic steel would be incorporated in the draft guidelines.

The manufacturing process using an alternative metallic material was not a risk as it was the responsibility of the manufacturer, subject to verification by an RO, to ensure that the fabricated material had the expected properties after fabrication of the tank. This would be achieved through the manufacturing of at least one tank placed in relevant service.

***Maximum thickness of material tested and consequential revision to MSC.1/Circ.1599***

CCC 6 agreed that the draft guidelines applied to alternative metallic materials having a maximum thickness of 40 mm. In doing so, it considered the increase of the maximum allowable thickness of high manganese austenitic steel referred to in the Interim guidelines on the application of high manganese austenitic steel for cryogenic service (MSC.1/Circ.1599), from 30 mm to 40 mm.

CCC 6 similarly agreed to the consequential revision to the Interim guidelines on the application of high manganese austenitic steel for cryogenic service (MSC.1/Circ.1599), with a view to approval by MSC 102.

***Expansion of the application of high manganese austenitic steel for other cargoes***

The expansion of the scope of application of the Interim guidelines to ethane and ethylene was proposed by the delegation from the Republic of Korea. CCC 6 decided not to consider the proposal at this stage and that this issue could be considered in a correspondence group,

***Amendments to the IMSBC code and supplements***

The draft individual schedules for ammonium nitrate-based fertilizer were further developed, taking into consideration that the technical issues should be discussed by E&T 33.

CCC 6 instructed E&T 33 to consider a possible revision of CCC.1/Circ.4, after the finalized draft individual schedules for ammonium nitrate based fertilizer.

***Proposals for amendment 06-21 of the IMSBC Code***

CCC 6 instructed E&T 33 to prepare the draft amendments (06-21) to the IMSBC Code, based on the documents submitted to CCC 6 and related documents submitted to E&T 33.

CCC 6 agreed in principle, to amendments to section 9, provision 9.2.3.7.3 of the IMSBC Code and referred the document to E&T 33 for further consideration and inclusion, if appropriate, in amendment 06-21 to the IMSBC Code

***Proposals for new individual schedules***

CCC 6 agreed to refer documents to E&T 33 for further consideration, draft of new schedules about the following products:

* Clam shell
* Lead concentrate, leach product
* Brown fused alumina.

***Draft amendment (40-20) to the IMDG Code***

The CCC6 authorized E&T 32 to finalize the draft amendments (40-20) to the IMDG Code, based on documents submitted to CCC 6, with a view to submitting the draft amendments to MSC 102 for consideration and adoption.

CCC 6 agreed to refer the following issues to E&T 32 for further consideration:

* simplification of segregation requirements by abolishing the distinction between acids and strong acids;
* assignment of alcoholates to the segregation group of alkalis and to require their segregation from acids;
* segregation from liquid organic substances when these organic substances did not meet the criteria for dangerous goods and were not declared as such;
* spontaneous ignition of charcoal and highlighting the issues that need to be considered for the safe transport of charcoal which has passed the N.4 test;
* new entry for UN 3549 (Medical Waste, Category A);
* provision 7.1.4.4.2 of the IMDG Code regarding "public access" to life-saving appliances.

CCC 6 agreed, in principle, to the consequential amendments to the Revised Emergency Response Procedures for Ships Carrying Dangerous Goods (MSC.1/Circ.1588) (EmS Guide), emanating from draft amendment 40-20 to the IMDG Code, and referred them to E&T 32 for finalization, with a view to approval at MSC 102 in 2020.

***Classification of UN portable tanks and ADR/RID tanks***

Competent authorities use dual classification of tank-containers in compliance with requirements applicable for UN portable tanks and requirements applicable for ADR/RID tanks at the same time.

The Plenary endorsed the proposal that for the UN portable tanks, which meet the requirements of chapter 6.7 of the IMDG Code, additional classification as per chapter 6.8 of ADR/RID was not required.

***Amendments to the CSS Code with regard to weather-dependent lashing***

CCC 6 had for its consideration the report of the Correspondence Group on Weather-dependent Lashing.

Reduction curve for basic accelerations due to significant wave height regarding weather-dependent lashing.

CCC 6 agreed to the draft amendments to annex 13 of the CSS Code and the associated MSC circular, for submission to MSC 102 for approval.

Concern was raised in plenary as to uniform implementation regarding "the decision on the level of cargo securing based on the length of the voyage and the weather forecast".

CCC 6 modified the draft text accordingly on the "approved Cargo Securing Manual", and the monitoring of environmental conditions and ship motions to ensure that the level of cargo securing was appropriate throughout the voyage.

The friction coefficient for "deck with grease or oil or ice" has been removed, as it would not be practical to implement and that the CSS Code assumed that the deck should be clear of grease, oil or ice.

CCC 6 has prepared the provision on "reduced operational speed" in order to calculate the maximum speed for not exceeding the limits of the securing arrangements.

The Plenary agreed to the draft consequential amendments to:

* MSC.1/Circ.1353/Rev.1 on the Revised guidelines for the preparation of the Cargo Securing Manual for submission to MSC 102 for approval and dissemination as MSC.1/Circ.1353/Rev.2 ;
* Resolution A.581(14) on Guidelines for securing arrangements for the transport of road vehicles on ro-ro ships, for submission to MSC 102 for approval and subsequent adoption by the Assembly;
* the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011 (2011 TDC Code) for submission to MSC 102 for approval.

***Unified interpretation of provisions of IMO safety, security and environment-related conventions***

CCC6 endorsed the consolidated draft MSC circulars on UIs of the IGF Code and on UIs of the IGC Code, and invited MSC 102 to approve them.

***Unified interpretation of paragraph 9.2.2 of part A-1 of the IGF Code***

CCC 6 considered the proposed unified interpretation on the use of segments of double walled pipes joined by common flanges where two o-rings represent the barriers against leakage into the engine-room instead of gas valve unit enclosure constructed as a continuous part of the double-barrier system.

Noting that further work was required, it agreed to task the correspondence group if established, to discuss this matter further.

CCC 6 considered the proposed unified interpretation on the regulations on redundancy of fuel supply. It agreed to task the correspondence group to discuss this matter further.

CCC 6 considered the proposed unified interpretation on control of tank pressure and temperature.

***Unified interpretations for paragraphs 4.20.1.1 and 4.20.1.2 of the IGC Code***

CCC 6 agreed to the draft UIs of paragraphs 4.20.1.1 and 4.20.1.2 of the IGC Code. The regulation 4.20.1.1 is applicable to independent tanks of type A or type B, primarily constructed of plane surfaces. This includes the tank corners which are constructed using bent plating which is aligned with the tank surfaces and connected with in-plane welds.

The regulation 4.20.1.2 is applicable to type C independent tanks including bi-lobe tanks, primarily constructed of curved surfaces fitted with a centreline bulkhead.

***Unified interpretations for paragraph 5.12.3.1 of the IGC Code***

CCC 6 agreed to the draft UI of paragraph 5.12.3.1 of the IGC Code for inclusion in the consolidated draft MSC circular containing the UIs related to the IGC Code that were agreed at this session.

***Unified interpretations for paragraph 13.9.3 of the IGC Code***

The Plenary agreed to the draft UI of paragraph 13.9.3 of the IGC Code for inclusion in the consolidated draft MSC circular containing the UIs related to the IGC Code that were agreed at this session.

***Unified interpretations for paragraphs 11.2 and 11.3.4 of the IGC Code***

IACS submitted draft IACS unified interpretations of paragraphs 11.2 and 11.3.4 of the IGC Code regarding emergency fire pumps and new draft unified interpretations of paragraph 11.3.4 of the IGC Code regarding fire pumps used as spray pumps, which have been developed in light of the discussions at CCC 5

Having considered the comments made at CCC 5, IACS had decided to delete part c) from the version of IACS UI GC22.

***Revision of the inspection programmes for cargo transport units carrying dangerous goods***

MSC 100 had noted a statement by the representative of FAO, affirming that CTU cleanliness was an integral part of the Code of Practice for Packing of Cargo Transport Units (CTU Code) and that FAO and the Secretariat of the International Plant Protection Convention (IPPC) had proposed to include CTU cleanliness among the selection criteria for the container inspection programmes to be developed.

CCC 6 had for its consideration draft amendments to the Inspection programmes for cargo transport units carrying dangerous goods (MSC.1/Circ.1442, as amended by MSC.1/Circ.1521), in order to widen the scope of the inspection programmes to include inspections of CTUs not containing dangerous goods and to include inspection criteria for pest contamination.

There was general support to widen the scope of the inspection programmes to include inspections of CTUs not containing dangerous goods.

CCC 6 agreed, in principle, to amend the inspection programme, in order to:

* further clarify that the selection criteria should be applied equally to CTUs carrying all types of cargoes, rather than being specifically on those declared to be carrying dangerous goods;
* Adequately refer to the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (CTU Code).

CCC 6 commenced the review of MSC.1/Circ.1442 to ensure the circular was "fit for purpose" for the inspection of all CTUs and made appropriate reference to the CTU Code.

**Correspondence groups established by CCC 6**

***Correspondence group to deal with safety of ships using low-flashpoint fuels***

Terms of reference:

* finalize the draft Interim guidelines for the safety of ships using fuel cell power installations;
* develop draft amendments to the IGF Code to address safety provisions for ships using low-flashpoint oil fuels;
* develop interim guidelines to address safety provisions for ships using LPG fuels
* finalize the remaining draft amendments to the IGF Code;
* further develop the draft UI regarding part A-1, paragraph 9.2.2 of the IGF Code;
* further develop the draft UI regarding part A-1, paragraph 9.3.1 of the IGF Code.

***Correspondence Group on Suitability of High Manganese Austenitic Steel***

Terms of reference:

* consider the expansion of the application of high manganese austenitic steel for other cargoes and fuels as defined in the IGC and IGF Codes;
* consider the scope and design of simulation testing which may be considered equivalent to service experience required for the purpose of amending the IGC and IGF Codes;
* consider the scope and design of compatibility testing of alternative metallic materials for the IGC Code cargoes or IGF Code fuels;
* based on the evaluation of additional information above, develop draft amendments to the IGC and IGF Codes to include high manganese austenitic steel for cryogenic service.