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**Group of Experts for the revision of the IMO/ILO/UNECE  
Guidelines for Packing of Cargo Transport Units**

**Second session**

Geneva, 19-20 April 2012

Item 2 of the provisional agenda

**Proposals for revision of the guidelines: Revised inception report**

**Revised Inception report**

**Note by the secretariat**

1. The secretariat reproduces below the revised inception report for the revision of the IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units.
2. The revised inception report provides an understanding of the underlining issues in relation to the revision of the guidelines, outlines the methodology and presents a proposed framework of the main chapters of the revised guidelines as well as a time schedule for the preparation and finalization of revised guidelines for consideration by the group of experts. This version contains the revisions made to the first inception report which came out of the first session discussion of the Group of Experts on 6–7 October 2011.
3. The Group of Experts may wish to consider the revised inception report and the proposals contained therein for the revision of the guidelines which have been approved by the Group in December 2011 when the document was circulated.

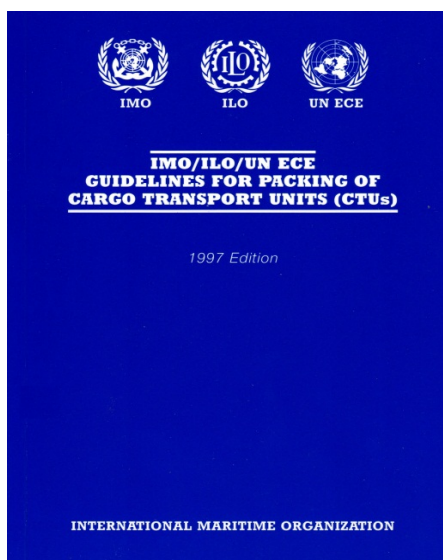
**REVISION OF 1997 EDITION OF THE**

**IMO / ILO / UNECE**

**GUIDELINES FOR PACKING OF**

**CARGO TRANSPORT UNITS (CTUs)**

**INCEPTION REPORT**



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**VERSION 2 OCTOBER 2011**

## Introduction

A tripartite Global Dialogue Forum on “*Safety in the Supply Chain in Relation to Packing of Containers*” was held by the ILO in Geneva on February 21<sup>st</sup> and 22<sup>nd</sup> 2011. This was attended by 83 representatives of Governments, Employers' and Workers' Organizations and relevant Intergovernmental and Non-Governmental Organizations. At this forum various sectors in the supply chain were represented including, shipping, ports, road transport, railways, shippers, freight forwarders, and marine insurance.

The Forum examined strategies and policies to help constituents in ILO Member States form a common approach throughout the supply chain for the correct application of appropriate standards in packing containers. This in turn would pave the way to a substantial improvement in container safety.

The Forum took into consideration a background report prepared by the Office titled "Safety in the Supply Chain in Relation to Packing of Containers", that was published in 2010 and adopted a set of points of consensus in relation to the subject matter, one of which refers to the revision of the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs), which is reproduced as follows:

"It is agreed that an ILO/IMO/UNECE Code of practice on the packing of CTUs is necessary. The three Organizations are requested to proceed with the revision of the existing guidelines for packing of CTUs which would form the code of practice."

The International Maritime Organisation (IMO) has already started work on revising those parts of the Guidelines that relate to the International Maritime Dangerous Goods Code (IMDG) which were finally accepted at the Maritime Safety Committee (MSC) meeting in May 2010. The Drafting Group that produced the initial amendments noted that there was a need to revise the Guidelines to reflect the changes in cargoes carried and equipment used.

At its 310<sup>th</sup> session (March 2011), the Governing Body of the ILO endorsed the revision of the IMO/ILO/UNECE Guidelines for packing of cargo transport units (1997 edition) by a joint IMO/ILO/UNECE working group with the objective to develop an IMO/ILO/UNECE Code of Practice and agreed to the participation of the ILO in the joint working group.

This Inception Report describes the process that can be adopted for the revision to the Guidelines and how they can be further modified to reflect the change to a Code of Practice.

## Current Guidelines

### Guidelines Contents

Preamble

Scope

Definitions

1.0 General conditions

2.0 Visual inspections prior to packing

2.1 Exterior inspection

- 2.2 Interior inspection
- 3.0 Packing and securing of cargo
  - 3.1 Before packing
  - 3.2 Packing and securing
  - 3.3 On completion of packing
- 4.0 Advice on the packing and securing of dangerous goods
  - 4.1 General
  - 4.2 Before packing
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  - 4.4 On completion of packing
- 5.0 Advice on receipt of CTUs
- 6.0 Basic principles for the safe handling and securing of CTUs
  - 6.1 General
  - 6.2 Lifting
  - 6.3 Containers on the ground
  - 6.4 CTUs on vehicles
  - 6.5 Securing CTUs
  - 6.6 CTUs on Ships
- 7.0 Training in packing of cargo in CTUs
  - 7.1 Regulatory authorities
  - 7.2 Management
  - 7.3 Personnel
  - 7.4 Training
  - 7.5 Recommended course syllabus – overview

## **Annexes**

- 1.0 Condensation
- 2.0 Labels, placards, marks and signs
- 3.0 Consequences of overloading of CTUs
- 4.0 List of relevant international organisations
- 5.0 Illustrations of “Dos” and DON'Ts”
- 6.0 Topics to be included in a training programme for the packing and securing of cargoes in cargo transports units (CTUs)

List of References

## Project Methodology

### Identify and List Stakeholders

I have identified three distinct groups of organisations that could be defined as stakeholders;

- 1 the parties that are actively involved with the supply chain, i.e. companies that physically pack or handle containers;
- 2 NGOs and governmental bodies representing the interest of the active parties; and
- 3 other organisations that provide a service to those involved in the supply chain.

Looking at each group in more detail:

- 1 Considering the stakeholders that are actively involved, these can be further divided into two groups:
  - 1.1 the generic stakeholder representing the role that the active party undertakes, such as Road Transport - short haul or Shipping Line – Liner Service. There are often multiple organisations representing specific elements of their industry; for example: the International Chamber of Shipping (ICS) and the World Council of Shipping (WCS).
  - 1.2 the individual organisation / active party, i.e. the company physically involved with packing, handling and conveying containers. Each of these may be represented by one or more generic stakeholder either directly or indirectly. It will be important to select a balanced population of stakeholder and contributor representatives at this level to allow a consistent approach to data collection and analysis.
- 2 NGOs, governmental and intergovernmental bodies
  - 2.1 NGO provide a conduit to the individual organisations / active parties but may have little specific data concerning their members' activities. They can however provide publications and information much of which is very valuable and detailed.
  - 2.2 There are many levels of governmental and intergovernmental organisations covering world, continental, country and local levels of regulations and guidance. Each of these has an important part to play in the smooth running of the supply chain and it is imperative that all aspects of their work merge consistently. In addition there are governmental and non governmental organisations that provide a service to the supply chain, e.g. accident investigation.
- 3 Other organisations
  - 3.1 The remaining companies and organisations that provide a service or role in support of the actively involved stakeholder. This group includes insurance companies and clubs, independent accident investigators and support companies such as Bureau International des Containers et du Transport Intermodal (B.I.C.).

I have already identified a number of these stakeholders and contributors and started a dialogue with them to introduce the project which will entail identifying their roles and responsibilities and the flow of information.

## Identify parameters and project scope

Currently the IMO / ILO / UNECE Guidelines for packing cargo into Cargo Transport Units (CTUs) as shown in the contents above is very much based on the requirements of packing cargo into dry freight general purpose containers. While there are references to other container types and other transport units, there are considerable deficiencies and omissions with respect to these transport unit types.

The preparation for the amendments to the Guidelines must consider where this document is to be used and by whom. At this stage, the tripartite nature of the three UN agencies sponsoring the publication would indicate that it should cater for all land and water based transport modes. Therefore any packing requirement for specific transport mode should be considered. It will not be sufficient just to consider packing an intermodal container and then presuming that when transported by road or rail modes, that it represents the packing requirements of road or rail specific equipment. The basic rules required for packing cargoes into any CTU must ensure that they are suitable for all inland transport modes and the resulting Code of Practice for the packing of cargoes should reflect that.

The work should:

1. consider whether the scope of the publication should cover the following cargo transport units:
  - a. All container types both in terms of specific types (General Purpose, Reefer, Flatrack, Tank etc.) and where they are used (deep sea / international, short sea / regional, swap body, national, domestic etc.) ;
  - b. All road vehicle types by specific type, (box van / trailer, flat-back / trailer, and different curtain side variations etc.);
  - c. All rail wagon types by specific type (box wagon, tank wagon, special purpose car carriers etc.);
  - d. Other CTU types not covered by a. to c. above.

The 1997 Guidelines followed the original publication and did not include tank containers firstly as they were not greatly used and then as it was considered that tanks are “filled” rather than “packed”. The revision of the Guidelines will consider those elements of tank container that relate to general principles, but which will not include specific instructions for specific cargoes and / or dangerous goods.

Secondly, rail wagons are generally only moved on rail tracks ashore and are not often loaded onto other transport modes, although rail wagons can be transported on specialist ferries.

The revision to the Guidelines will consider both of these types of CTU and provide general information on each type and reference will be made to international and national regulations, for example EU, USA and Australia.

2. consider whether the scope of the publication should cover:
  - a. All dry discrete cargoes that can be carried within or on a CTU;
  - b. All dry bulk cargoes that can be carried within box type CTUs;
  - c. All liquid cargoes that are carried within intermediate packages within on or a CTU;
  - d. All liquid bulk cargoes that can be carried within closed box type or portable tank type CTU;
  - e. All gases that are carried within intermediate packages within or on a CTU;
  - f. All gases that can be carried within a pressurised portable tank type CTU;
  - g. All project cargoes that may be carried across two or more platform type containers;
  - h. Others units not covered above.

Cargoes transported over two or more flatracks may be considered cargo covered by the CSS Code and the ship's cargo securing manual. Therefore it is important that the revision should not include cargoes and their securing that are covered by other codes. However, cargoes secured on a single flatrack could use similar securing techniques as described in the CSS Manual.

3. consider whether the scope of the publication should encompass:
  - a. preamble to the Code of Practice;
  - b. scope of the Code of Practice;
  - c. definitive definition of all terms associated with packing cargoes;
  - d. definitive definitions of all terms associated with shipping of cargoes;
  - e. general conditions that would affect cargoes during transportation;
  - f. consequences of cargo packing failure;
  - g. visual inspections prior to packing. This will consider the CTU from the moment it arrives at the packer's yard, and provides best practice for opening and entering the CTU and internal and external checks to ensure that the CTU is safe and fit for use.
  - h. packing and securing of cargo – general rules;
  - i. packing and securing of cargoes within or on specific CTU types;
  - j. loading and unloading practices;
  - k. lashing, bracing and blocking techniques and practices;
  - l. use of dunnage;
  - m. loading and securing palletised cargoes;
  - n. specific advice for dangerous goods. The amended text of Part 4 of the Guidelines may be included in this section, however consideration will be given to excluding any detail that is covered by other regulatory codes, such as the IMDG Code.
  - o. cargo mass and distribution;

- p. documentation requirements. This section may consider packing certificates which include cargo mass securing method and accredited packer declaration.
  - q. security. This will include sealing instructions and information to be included on packing certificates.
  - r. handling CTUs during transporting;
  - s. securing CTUs on the ground and on all transport modes;
  - t. receiving and unpacking CTUs. This will include removing seals, opening doors, ventilation and entering the CTU.
  - u. Environmental disposal of dunnage;
  - v. cleaning CTUs after unpacking;
  - w. other items not covered above.
4. consider scope of training requirements:
- a. what level of training is required;
  - b. who should be covered by the training;
  - c. how it may be given;
  - d. whether it should be mandatory. While the revised Code of Practice will remain a non-regulatory document, consideration will be given to specific requirements, such as the packing certificate, which may be made mandatory under other instruments.
5. incorporate all items agreed in 1. to 4. above into the final publication.

In preparation of the Code of Practice, it will be necessary to liaise with various governmental and industry bodies to solicit their views and requirements of the Code of Practice.

The Code of Practice should also consider how it can draw on and reference industry publications already available and whether they should or could be incorporated into the final Code of Practice.

### **Identify and incorporate other input**

The final Code of Practice should take due consideration of:

1. the Points of consensus and conclusions of the Global Dialogue Forum held at the ILO in February 2011,
2. the work already undertaken by the IMO and any issues that arise from their future meetings during the preparation of the final publication.



## Global Dialogue Forum consensus points

In total 29 points of consensus were reached many of which related to the Guidelines and are reproduced below:

### **Theme 1 Reasons that lead to the application of poor practices in packing of containers**

9. Those responsible for packing containers are not reached by the existing guidance on good practices for packing containers, including the IMO / ILO / UNECE Guidelines for packing cargo transport units (CTUs).
10. The role and responsibilities of all the stakeholders, including governments, in the supply chain are not always clearly defined. This includes the responsibility for raising awareness of how to pack containers safely.
11. There is a lack of a system for the inspection of containers for proper packing at the point of origin.
13. Misdeclaration and the lack of adequate information on container contents and weight.
14. Different consignments are packed in the same container and unpacked without the appropriate planning and coordination.
15. Poor practices in the packing of containers also results from breaches of laws and regulations.

### **Theme 2 Compliance to standards on packing of containers**

20. It is agreed that an IMO / ILO / UNECE Code of Practice on the packing of CTUs is necessary. The three organizations are requested to proceed with the revision of the existing Guidelines for packing of CTUs which would form the Code of Practice.
21. Governments and all supply chain actors involved in the handling and/or transport of containers should participate in this revision process.
23. The Code of Practice should therefore apply to the whole of the supply chain, with clearly identified responsibilities and accountability.
24. In preparing the Code of Practice, the possibility of a subsequent document stating that the container has been packed according to the Code of Practice should be considered.

### **Theme 3 Training on packing of containers and reaching out to all stakeholders for the dissemination and application of common standards and good practices**

26. Awareness of and training on consistent standards for the whole supply chain are necessary. The need for appropriate skills and competencies in all components of the supply chain should be addressed. However, guidelines on best practices should be established in order to ensure that correct training on techniques and practices would be implemented.

### **Theme 4 Recommendations for a common approach throughout the supply chain for the correct application of the appropriate standards and good practices in packing of containers and follow-up activities**

39. Once the Code of Practice emanating from the revised/updated IMO / ILO / UNECE Guidelines for packing CTUs is adopted, it will be important to ensure it is followed up

with user-friendly publications (training material, tool kits, etc.) and that the code, and the accompanying publications, are made free and easily accessible and are widely disseminated. This follow-up should be undertaken in consultation with a steering committee and task forces on specific activities to be set up by the International Labour Office in consultation with the tripartite constituents of the Organization.

A clear message from these consensus points is that there is a real need to have a readily available and comprehensive document that can be used by everyone within the supply chain, both from the point of view of the packer, to ensure that the CTU is packed correctly and safely, but also by those involved in handling and shipping the CTU.

An item where consensus was not reached but has a bearing on the final Code of Practice relates to types of cargo:

- 17 It was maintained that some types of cargo that, due to their size, weight and configuration, should not be shipped in containers

While this point was not agreed upon, there is a concern that certain cargoes are being shipped in inappropriate CTUs or being transported in an inappropriate package. The Code of Practice could convey a clear and simple message which advises packers and operators about the consequences of such use. For example CTU where one door is left open or is removed during transport for specific cargoes or bulk liquid cargoes carried in flexitanks that are classified as dangerous goods under the IMDG Code due to the risk of a catastrophic failure of the tank.

The revised Guideline may include advice on cargoes that should be carried as break bulk or oversized project cargo.

## **IMO Amendments**

The IMO has already been engaged in amending those sections of the Guidelines that relate to the International Maritime Dangerous Goods (IMDG) Code. These amendments are shown in their meeting document MSC 89 / 25 / Add.1 Annex 10 Amendments to the IMO / ILO / UNECE Guidelines for packing cargo transport units (CTUs), and are attached to this document.

The IMO delegates have indicated that these amendments should be incorporated into the final document without substantial amendments, except where change is needed to further amendments to the IMDG Code.

## **Specific Additional Amendments**

With reference to 3e above (Section: Identify parameters and project scope), to ensure that references to vertical, lateral and longitudinal acceleration is consistent with other applicable standards, e.g., European Standard EN 12195:2010.

It is also important that wave characteristics (height and frequency) is used to describe the differing sea conditions rather than specific European sea areas. A defined relationship between significant wave height and acceleration values would make it possible to apply reduced acceleration values to sea areas outside Europe too.

With reference to 3g in the same section above, a new subsection could be added to the Guidelines entitled "Measures to minimize contamination by plant pests" in order to ensure that:

1. procedures for packing and subsequent storage, loading and transport of CTUs minimize contamination by plant pests are available;
2. CTUs are decontaminated and treated (outside and inside) prior to export (including treatments for permanent container flooring made of plant material) and contaminants are safely disposed of; and
3. inspections are carried out prior to export.

This guidance would facilitate safe transport, help avoid delays due to additional inspection at points of entry and help avoid the introduction and spread of organisms that are harmful to plants.

With reference to 3k in the same section above, provide guidance on the calculation of the number and strength of the lashing or blocking material used for the securing of cargo. In this respect the Guidelines should provide the following information, which is currently not included:

1. friction coefficients, which could be based on the values given in annex 13 of the CSS Code and / or model course 3.18 Safe Packing of Cargo Transport Units;
2. capacity of lashing points in containers based on applicable ISO standards;
3. information on maximum permissible load per meter within a container;
4. information on the maximum securing load of container side and end walls based on CSC requirements;
5. information on maximum permissible gaps for cases where cargo is stowed from wall to wall;
6. bracing capacity of wooden framework, methods to calculate quantity and dimensions of lumber beams; and
7. securing capacity of loop, spring, cross and overtop lashings, methods to calculate quantity and dimensions of lashings.

There are various sources available where such methods of calculation are described, e.g., in the quick lashing guide of IMO Model Course 3.18, in the European Standard EN 12195-1:2010 as well as in various national or local standards. Furthermore, annex 13 of the CSS Code provides an advanced calculation method to assess the efficiency of securing arrangements for non-standardized cargo on ships which could be adapted in such a way that it could also be used to assess the efficiency of securing of cargo in cargo transport units.

The revised Guidelines should provide details on the types of lashing and their capabilities and describe the benefits of each method.

With reference to 3q in the same section above, changes in ISO standards referring to security seals have resulted in various categories of seal and the Guidelines should include reference to the type of seal that can be applied and where the seals should be applied.

With reference to 3t in the same section above, consideration should be given to the effects of fumigants and other vapours and gases given off by the cargo during transport. There is evidence that fumigant materials are not always applied in line with written instructions and are often arbitrarily applied even though they are not required. Furthermore toxic gases emanating

from the chemicals applied to the cargo during the manufacturing process are often found to be present in the container at the time of unpacking.

With reference to 3u in the same section above, consideration should be given to the type of dunnage that can be used for blocking and bracing, with particular reference to Sanitary and Phytosanitary Agreement requirements and the environmental issues associated with the disposal of these materials after use.

Stakeholders are invited to submit additional proposals for amendments to the Guidelines

## Format

In preparing the Code of Practice, it is important to understand how it will be used and by whom. Consideration should be given to revising the format to permit the best use of the Code of Practice by the user groups. Management and administrative roles require information at a higher less detailed level, whereas those involved in packing CTUs will focus on those cargoes and packing techniques that they need. Therefore one of the first tasks is to understand what the stakeholders expect to get from the Code of Practice.

Another issue relates to the actual format of the document. There is a clear message from those involved in preparing the way for this revision to the Guidelines, that the final document should be readily available to all within the supply chain. To simplify availability, it may be worth considering producing the Code of Practice in parts, perhaps relating to the different types of equipment used or the cargoes carried and where there are levels of detail related to the role of the target audience. For example:

1. General overview for general management
2. Detailed information for supervision
3. Detailed packing procedures for packing operative.

The last part, detailed packing procedures, could be in the form of a web based information system such as found at [www.containerhandbuch.de](http://www.containerhandbuch.de)

## Methodology

Producing the Code of Practice will be an iterative process starting with an initial draft which will be produced based on the feedback from this document and the Groups of Experts meeting (October 6<sup>th</sup> and 7<sup>th</sup> 2011, Geneva). It is hoped that one output from this initial meeting of the Group of Experts will be to define the scope and expectations of the final document and what criteria would constitute a successful outcome.

Thereafter a further three meetings of the Group of Experts will be held and each will be a formal assessment of the progress towards the final document and opportunities for the Group of Experts to refine their expectations and success criteria as well as exploring different approaches to specific sections. It will be necessary to use the time between the Group of Experts meetings to explore options and approaches and testing ideas within the supply chain. To fulfil this aspect of the project two processes will be adopted. Firstly it is proposed that a number of round table consultations will be held and secondly individual sections of the draft will be tested with specific supply chain or industry specialists or sectors.

## Consultations

In order to ensure that the Code of Practice reflects the needs of the stakeholders, it is important that they have ample opportunity to provide feedback on strengths and weaknesses of the current Guidelines and proposed Code of Practice.

Therefore it is proposed that a number of round table discussions will be held with organisations such as the World Shipping Council, the Global Shippers Forum and the International Transport Workers Federation. These round table discussions will consist of two sessions, a general overview of the whole and a detailed discussion of those parts of the Code of Practice that are pertinent to that group.

It will be essential that contributors to the round table discussions are free to express their opinions and that every issue is subjected to a balanced and positive debated and those items where consensus is reached is incorporated into the next draft of the Code of Practice.

## Test scenarios

Due to the importance that the Global Dialogue Forum placed on the revision to the Guidelines and the need to publish it expeditiously, it is essential that the document presented to the appropriate bodies within the IMO, ILO and UNECE is robust and fulfils their expectations without major revisions or amendments. Therefore it is intended that the Code of Practice in its draft form is discussed in detail with a number of national governmental representatives of the three bodies and other industry specialist NGOs worldwide.

The governmental and industry bodies will be given the opportunity provide feedback to the draft Code of Practice and explore how the Code of Practice can be incorporated into, and effect national legislation, rules and guidelines.

The second aspect of the test process will be to take those elements of the Code of Practice that affect different players within the supply chain and assess how well it caters for the needs of the user. The nature and extent of the test scenarios may be set by the Group of Experts as part of their development of the success criteria.

## Project Programme

**See attached project timescale**

*Bill Brassington*

*October 12<sup>h</sup> 2011*