

## Handling, Transportation, Warehousing of Hazardous Materials(Dangerous Goods) at Ports

### INTERNATIONAL MARITIME DANGEROUS GOODS CODE

- The U.N recommendations form the basis for all regulations on dangerous goods irrespective of the mode of transport
- The provisions set out in the IMDG Code are implemented by the various countries through local legislation

The objective of the International Maritime Dangerous Goods (IMDG) Code is to:

- Enhance the safe transport of dangerous goods
- Protect the marine environment
- Facilitate the free unrestricted movement of dangerous goods

The International Maritime Organization (IMO)

- The IMO has developed two international conventions to address these issues:
  - The SOLAS Convention (covering safety of life at sea)
  - The MARPOL Convention (covering pollution prevention)
- To supplement the principles laid down in the SOLAS and MARPOL Conventions, the IMO developed the International Maritime Dangerous Goods (IMDG) Code.
- The IMDG code contains detailed technical specifications to enable dangerous goods to be transported safely by sea.

- The IMDG Code is based on an internationally agreed system which:
- Groups dangerous goods together based on the hazards they present in transportation
- Contains the dangerous goods in packagings/tanks which are of appropriate strength and which will prevent the goods escaping.
- Uses hazard warning labels and other identifying marks to identify dangerous goods in transport.
- Requires standard documentation to be provided when dangerous goods are being transported.

- Lays down principles for ensuring that dangerous goods which will react dangerously together are kept apart.
- Lays down principles for where to place dangerous goods on board ship to ensure safe transport.

## Updating the IMDG Code

- The present IMDG Code 2010 Edition is currently in force from 1<sup>st</sup> of January 2012
- The IMDG Code 2012 Edition will come into force from 1<sup>st</sup> January 2014

## Layout of the IMDG Code

- \* The IMDG Code consists of 2 Volumes and a supplement
- \* The First volume consists broadly of
  - General provisions,
  - Packaging,
  - Classification
- \* The Second volume consists broadly of
  - Dangerous Goods List
  - List of Generic and N.O.S. (Not Otherwise Specified) Proper Shipping Names

The supplement contains the following texts related to the Code:

- Emergency Response Procedures for Ships Carrying Dangerous Goods
- Medical First Aid Guide

## IMDG Code Classification System

- The purpose of the IMDG Code's classification system -
  - To distinguish between goods which are considered to be dangerous for transport and those which are not.
  - To identify the dangers which are presented by dangerous goods in transport.
  - To ensure that the correct measures are taken to enable these goods to be transported safely without risk to persons or property.

- Dangerous goods are classified into 9 classes according to their properties. The way in which different classes of dangerous goods are handled in transport will depend upon these properties and hazards, for example:
  - The type of packaging that can be used.
  - What classes of dangerous goods can be transported together in freight containers.
  - Where the goods can be stored within the port and on the ship.

## IMDG CLASS

### CLASS

### DESCRIPTION

- | CLASS | DESCRIPTION   |
|-------|---|
| 1     | ▪ Explosives  |
| 2     | ▪ Flammable gases   |
| 3     | ▪ Flammable liquids   |
| 4.1   | ▪ Flammable solids  |
| 4.2   | ▪ Substances liable to spontaneous combustion                 |
| 4.3   | ▪ Substances which in contact with water emit flammable gases |
| 5.1   | ▪ Oxidizing substances  |
| 5.2   | ▪ Organic Peroxides   |

6.1

6.2

7

8

9

- Toxic substances
- Infectious substances
- Radioactive substances
- Corrosive substances
- Miscellaneous substances



## Responsibilities of the shipper

- Classification of the goods
- Issue the Dangerous Goods Declaration
- Shippers Declaration
- Provide Tremcard ( ADR only )
- Container Packing Certificate
- Mixed loading
- Securing of Cargo
- Provide carrier with all documents
- Choose approved packages with labeling on them

## Information in the dangerous goods Declaration

- Proper Shipping name
- Class, division
- UN No.
- Packing group
- Total Qt.
- Shipper/Consignee
- Number and type of package
- Flashpoint  $\leq 61$  °C
- Marine pollutant
- Information regarding mixtures, solutions etc
- EMS No./MFAG Table No



The language in the declaration must be English

- \* Proper shipping name as stated in the IMDG Code
- \* IMO Class or Division (for Class 1, the risk group, compatibility letter and stowage arrangements must be added)

## Carriers Responsibility

The carrier is responsible for ensuring that-

- Consignments which do not meet the demands in the transport rules are rejected
- The DG are loaded correctly and securely
- The mixed loading rules are being complied with
- The DG are in Compliance with the segregation rules
- The container Packing Certificate is Being Issued
- Correct Transport documents accompany the shipping

## Handling, Transportation, Warehousing of Hazardous Materials(Dangerous Goods) at Cochin Port

### Rules And Regulations

- Handling of Hazardous cargo in Cochin Port is governed by provisions of
- Indian Ports Act 1908(15 of 1908)
- Major Port Trust Act 1963
- MARPOL Regulations 73/78
- International Maritime Dangerous Goods Code
- "Handling of Freight Containers carrying Dangerous Cargo-CoPT-1987
- For the purpose of this regulation, the Dangerous Cargo, shall cover all substances classified under the IMDG code by IMO.

## General accountability of ship carrying dangerous goods:-

- All Dangerous Cargo entering the Port area must be classified ,packed ,labeled and marked in accordance with the IMDG Code.
- Declaration by ship and shipper.
- Container shall be marked and labeled.
- Accompanied by packing certificate.
- Accompanied by stuffing certificate.

## Restriction on ships carrying IMDG Cargo

- Ships carrying 'Explosives' are permitted at notified berths only.
- Permitted quantity of cargo is only allowed
- Hazardous cargo handling during day-light hours as far as practicable.
- Master / Agent should inform Port Authorities 48 Hrs. before arrival of the vessel of the presence of IMDG Cargo.
- Permission shall be obtained by the steamer agent for Landing, Loading /Unloading of IMDG Cargo.

## Precautions During Cargo Operations

- Vessel to be berthed only at the designated berth.
- Containers only to be stacked at the 'Notified area'
- Proper segregation to be maintained
- Special fire fighting arrangements provided.
- Stuffing-de stuffing, if any, done with permission from Dy. Conservator