- the probability of other cargo being placed on top and the possibility of goods being walked on should be taken into consideration;

- the unit should be fully marked with port marks, addresses, gross unit weight, general handling and stowing advice, dimensions, special precautions that might apply, and any other pertinent information.

### *3. Containerized Freight*

a. Definition

Containerized freight is freight which can be loaded into a container.

b. Examples

Examples include any type of merchandise, bulk commodities and liquids, as well as unit loads.

c. Handling Techniques

Handling involves the use of carrier-owned equipment, such as containers, overhead cranes, flatbed cars and trucks, and container vessels.

The advantages of moving goods in containers are the same as for unit loads — reduced labour costs, carrier transit times, pilferage and breakage. In addition, there is a reduction in packaging costs because the container becomes the actual transport package.

## *Handling Techniques According to Package Unit*

### *1. Bags*

A fundamental concern with bagged cargo, especially when packed into containers, is shifting. Bagged cargo which has shifted not only puts extreme pressure on the container walls, but is also likely to burst out of the container when the doors are opened.

It takes a comparatively long time to pack and unpack a container of bagged cargo. The use of expendable pallets would probably be more economical.

### *2. Bales*

The strength, shape and rigidity of a bale is determined by its contents. The outer covering may be of hessian, paper or some other material. When packing bales, care should be taken not to damage the outer covering.

Normally, bales are stuffed into transport equipment by forklift trucks. When stowing bales of paper or wood pulp, wood battens of the same length as the transport equipment should be laid out on the floor of that equipment and on the lower layer of bales to assure that a forklift truck can discharge the cargo.

Protection must be provided against sharp corners and edges. Bales should not be stowed directly against edges and corners without some form of protection. Loads should be secured by timber strutted against corner posts.

### *3. Cartons*

Cartons chafe easily, so a tight stow, using "filler pieces," strutting or lashing is essential to absorb any movement. Packing is started at the front end of the transport equipment and filling is carried out from the sides to the middle. The space should be utilized so as to avoid unnecessary waste space.

If free space remains, the cargo should be strutted. This is particularly important in the case of fragile goods with light packaging.

### *4. Small Cases and Crates*

In principle, the same precautions and stowage patterns apply as for cartons. To improve the stability of the stow, cases should be turned or staggered to give a three-dimensional brick wall effect. To reduce movement and the possibility of collapse when the doors are opened, the cases may even be nailed to each other.

### *5. Drums and Barrels*

Before loading drums or barrels, ensure that they are not leaking. Leaking drums and barrels must not be loaded. Barrels should always be loaded with the bung or closure uppermost.