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# INTERNATIONAL STANDARD



# 3827 / II

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## Shipbuilding — Co-ordination of dimensions in ships' accommodation — Part II : Glossary of terms

*Construction navale — Co-ordination dimensionnelle pour l'ameublement des navires — Partie II : Glossaire de termes*

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**Descriptors** : shipbuilding, ships, appointments, furnishing, prefabrication, dimensional co-ordination, modular structures, vocabulary.

## FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3827/II was developed by Technical Committee ISO/TC 8, *Shipbuilding*, and was circulated to the member bodies in June 1975.

It has been approved by the member bodies of the following countries :

|                |             |                       |
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| Austria        | Israel      | South Africa, Rep. of |
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The member body of the following country expressed disapproval of the document on technical grounds :

France

# Shipbuilding — Co-ordination of dimensions in ships' accommodation —

## Part II : Glossary of terms

### INTRODUCTION

The rationalization of traditional shipbuilding methods provides a unique opportunity for the introduction of a system of dimensional co-ordination similar to that prepared for land use within ISO/TC 59, *Building construction*. The system will give module sizes, controlling dimensions, recommendations for co-ordinating spaces, etc., for use in dimensional co-ordination in shipbuilding and will thus facilitate greater use of prefabricated assemblies and utilization of related standard components.

In the adoption of dimensional co-ordination, the fullest possible clarification of the concepts involved and the terms expressing those concepts is essential and this part of ISO 3827 is intended to promote such understanding. It should be read in conjunction with :

- Part I : Principles of dimensional co-ordination;
- Part III : Co-ordinating sizes for components and assemblies;
- Part IV : Controlling dimensions.

### SCOPE AND FIELD OF APPLICATION

This International Standard defines terms relating to dimensional co-ordination in shipbuilding. The terms are arranged in groups to cover separate aspects of the subject. Reference systems feature significantly in the dimensional co-ordination of ships and components. The "reference system" (clause 4) is the overall geometric network used to divide a ship's layout and to express dimensional requirements for various components and assemblies. Within this the "controlling reference system" (clause 5) relates only to the sizes and positions of elements of construction within the dimensional framework of the ship. The "component reference system" (clause 6) provides, in a comparable form, the dimensional description of an individual component for the purpose of its co-ordination with adjacent components.

An index of the terms is provided separately.

### GLOSSARY

NOTE — Words in italics in definitions are terms defined elsewhere in this glossary.

#### 1 CO-ORDINATION

**1001 dimensional co-ordination** : The application of a range of related *dimensions* to the sizing of *components* and *assemblies* and the structures incorporating them.

**1002 modular co-ordination** : *Dimensional co-ordination* using the *international basic module*, *multimodule*, and *sub-module* and a *modular reference system*.

#### 2 GENERAL

**2001 dimension** : A distance (for example between two points, lines or planes).

NOTE — The definition relates to the geometric concept of a dimension. In ordinary usage, the word "dimension" is also sometimes used to denote a specified *size*; thus, reference is made to the "dimensioning" of a drawing when the meaning is to enter upon it the specified values of the dimensions.

**2002 size** : The magnitude of a *dimension* in terms of a defined unit.

**2003 preferred size** : A *size* chosen in advance of others for specific purposes.

#### 3 MODULES

**3001 module** : A convenient unit of *size* which is used as an increment of coefficient in *dimensional co-ordination*.

**3002 standard module** : A *module* whose *size* is selected from the preferences listed in ISO 3827/III.

**3003 basic module** : A *module* whose *size* is 100 mm.

**3004 multimodule** : A *module* whose *size* is an agreed multiple of 100 mm.

**3005 sub-module** : A *module* whose *size* is an agreed subdivision of 100 mm.

## 4 THE REFERENCE SYSTEM

### 4.1 General

**4101 reference system** : A system of points, lines and planes to which *sizes* and positions of a *component* or *assembly* may be related.

**4102 reference point** : A point of a *reference system*.

**4103 reference line** : A line of a *reference system*.

**4104 reference plane** : A plane of a *reference system*.

**4105 zone** : A space between *reference planes* within or in relation to which a *component* or group of *components* is arranged. The space may be left unfilled.

**4106 neutral zone** : A *zone* which interrupts the regular increments of a *reference system*.

**4107 modular reference system** : A *reference system* in which the distance between consecutive parallel planes or lines is the international *basic module* or a multiple thereof.

**4108 modular point** : A point of a *modular reference system*.

**4109 modular line** : A line of a *modular reference system*.

**4110 modular plane** : A plane of a *modular reference system*.

**4111 modular zone** : A *zone* between *modular planes*.

**4112 modular space** : A space bounded by *modular planes*.

**4113 modular dimension** : A *dimension* between *modular planes*.

**4114 modular size** : The *size* of a *modular dimension*.

### 4.2 Line representation

**4201 reference grid** : A rectilinear network of *reference lines* in one plane.

**4202 layout grid** : A *reference grid* applied to the layout drawings of a ship.

**4203 structural grid** : A *layout grid* for locating structure.

**4204 space grid** : A three-dimensional network of rectilinear *reference lines*.

**4205 modular grid** : A *reference grid* in which the distance between consecutive parallel lines is a multiple of the international *basic module*.

**4206 basic module grid** : A *reference grid* in which the distance between consecutive parallel lines is one *basic module*.

## 5 THE CONTROLLING REFERENCE SYSTEM

**5001 key reference plane** : A *reference plane* which defines the boundary of a *controlling zone* or the axis of a bulkhead.

**5002 controlling line** : A line representing a *key reference plane*.

**5003 controlling zone** : A *zone* between *key reference planes*, provided for a deck, deckhead, bulkhead or lining.

NOTE — Controlling zones contain the structure together with finishings, services, linings, suspended ceilings, etc., as applicable.

**5004 controlling dimension** : A *dimension* between *key reference planes*, for example deck to ceiling height, width of controlling zone.

**5005 tween deck height** : The height from top of beam to top of beam.

**5006 deck to ceiling height** : The height between the upper *key reference plane* of one deck and the lower *key reference plane* of the ceiling above.

**5007 boundary condition** : The dimensional relationship of a boundary of a *zone* or *co-ordinating space*, to an adjacent *key reference plane* or other *reference plane* specified in relation to a *key reference plane*.

### NOTES

1 A zero boundary condition exists where the boundary of the *zone* or space is coincident with the *reference plane*.

2 A positive boundary condition exists where the *zone* or space extends past the *reference plane*.

3 A negative boundary condition exists where the *zone* or space stops short of the *reference plane*.

## 6 THE COMPONENT REFERENCE SYSTEM

**6001 co-ordinating plane** : A plane by reference to which a *component* or *assembly* is co-ordinated with another.

**6002 co-ordinating space** : A space bounded by *co-ordinating planes*, allocated to a *component* or *assembly*, including allowance for joints and tolerances.

**6003 co-ordinating dimension** :

1) A *dimension* of a *co-ordinating space*.

2) A *dimension* which is common to two or more *components* to permit their assembly.

**6004 co-ordinating size** : The *size* of a *co-ordinating dimension*.

NOTE — Recommendations for the derivation of co-ordinating sizes for components and assemblies are contained in ISO 3827/III.

## 7 THE COMPONENT AND ITS SIZES

**7001 component** : Material formed as a distinct unit.

**7002 modular component** : A *component* whose *co-ordinating sizes* are in accordance with ISO 3827/III.

**7003 assembly** : An aggregate of *components* used together.

**7004 work size** : A *size* of a *component* specified for its manufacture, to which its actual size should conform within specified permissible deviations.

**7005 manufacturing size** : A *size* within the specified permissible deviations from a *work size*.

**7006 limits of size** : The extreme permissible *manufacturing sizes* between which the actual size should lie.

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