International Standard 7838

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Shipbuilding — Shiplines — Formats and data organization

Construction navale — Formes et lignes de navires — Formats et ordre de présentation des données

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

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 7838 was developed by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*, and was circulated to the member bodies in September 1983.

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

Australia	India	Poland
Bulgaria	Italy	Romania
China	Japan	Spain
Czechoslovakia	Korea, Dem. P. Rep. of	Sweden
Egypt, Arab Rep. of	Korea, Rep. of	USSR
France	Mexico	
Germany, F.R.	Netherlands	

The member body of the following country expressed disapproval of the document on technical grounds:

Cuba

Printed in Switzerland

Shipbuilding — Shiplines — Formats and data organization

1 Scope and field of application

This International Standard specifies the formats and organization of data for the exchange of geometrical information between different systems of ship hull definition.

2 Reference

ISO 7461, *Shipbuilding — Shiplines — Numerical representation of elements of the hull geometry.*

3 Terminology

The terminology used in this International Standard is in accordance with ISO 7461.

4 Sequential file structure

4.1 First data block

The first data block in the file consists of one (1) record which contains:

— file name: up to 24 characters;

— maximum block length, in words: one-word integer number.

4.2 Subsequent data blocks

4.2.1 Contents

Subsequent blocks of data contain geometrical information. Each block contains complete numerical representation of one shipline and consists of four (4) records.

— one (1) alphanumeric line identifier;

— three (3) projections of the line on orthogonal planes.

4.2.2 Layout

The layout of a block is the following:

4.2.2.1 Record 1

IDENT: line identifier up to eight (8) alphanumeric characters;

L: line type parameter (integer).

The line type parameter takes the following values:

L = 1 for a 2-dimensional line;

L = 2 for a 3-dimensional line contained in a non-orthogonal plane;

L = 3 for an arbitrary 3-dimensional line.

4.2.2.2 Record 2

C: projection plane indicator (integer);

S: distance from the origin of the axis systems of orthogonal plane defining 2-dimensional line, in millimetres (real number);

When L = 2 or L = 3, S = 0.

N: number of points on the projection of the line (integer);

P(1), V(1): coordinates of the first point, in millimetres (real number);

PS(1), VS(1): not used for definition of the line geometry;

P(2), V(2): coordinates of the second point, in millimetres (real number);

PS(2), VS(2): coordinates of the centre of the circular arc in the first segment, in millimetres (real number);

...

P(N), V(N): coordinates of the N^{th} point, in millimetres (real number);

PS(N), VS(N): coordinates of the centre of the circular arc in the $(N-1)^{th}$ segment, in millimetres (real number).