International Standard

ISO 7461

Shipbuilding — Shiplines — Numerical representation of elements of the hull geometry

Construction navale — Formes et lignes de navires — Représentation numérique des éléments de la forme géométrique de la carène

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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 preparing International Standards is normally carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7461 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures.*

Shipbuilding — Shiplines — Numerical representation of elements of the hull geometry

1 Scope and field of application

This International Standard establishes a method of representing the geometry of ship hull lines in numerical form, to allow exchange of geometrical data between different systems of ship hull definition. The data formats to be used are specified in ISO 7838.

2 References

ISO 7460, *Shipbuilding — Shiplines — Identification of geometric data.*

ISO 7838, *Shipbuilding — Shiplines — Formats and data organization.*
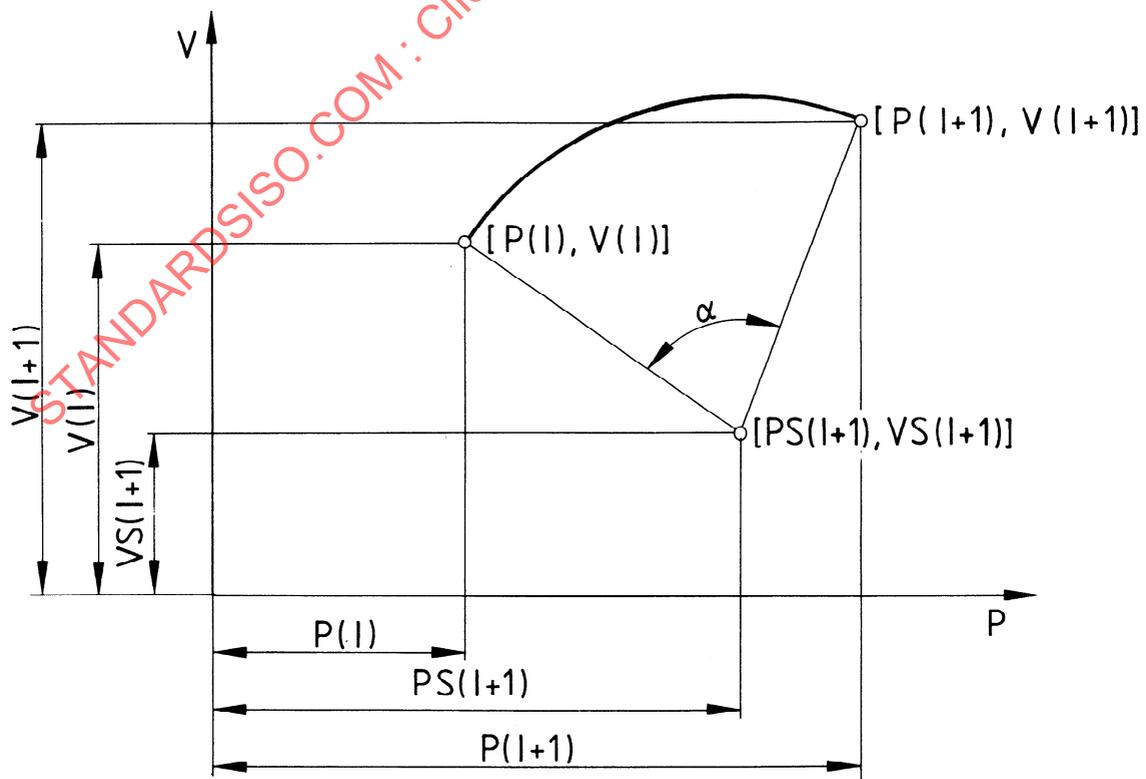
3 Numerical definition of lines

A plane chain curve is adopted as the standardized basis to define ship hull lines. Those lines which do not lie in a plane are defined as projections of orthogonal planes.

3.1 Interpolating functions

The ship hull lines are defined by means of a set of interpolating functions. The standard interpolating functions are straight line and circular arc.

3.2 Definition of the ship hull line

The ship hull line is composed of $(N-1)$ segments. Each segment may be a straight line or a circular arc. The angle α of a circular arc is less than π (see the figure).

Figure