

Applicability Range of Holtrop-1984 Method

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OVERVIEW

The Holtrop-1984 resistance prediction method is one of the techniques widely used for predicting resistance of displacement and semi-displacement vessels. Like all methods, however, this technique is limited to a suitable range of hull form parameters.

RANGE OF PARAMETERS

The basic ranges of parameters (e.g., F_n , C_p , L/B , B/T) for the method are described in the literature and in the NavCad User's Guide. However, anecdotal experience and testing by HydroComp have identified an additional parameter that should be checked.

NEW PARAMETER [LAMBDA]

Lambda is a parameter used within the Holtrop method. It is equal to: $1.446 C_p - 0.03 L/B$

Based on the data used to develop the Holtrop method and testing of vessels from HydroComp files, we have determined that Lambda should never exceed the figure shown on the accompanying chart. Lambda below the line indicates that the hull fits the Holtrop dataset, and above the line it does not.

Users of the Holtrop-1984 method should refer to this chart to determine if Holtrop-1984 is a suitable method for the vessel under consideration.

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