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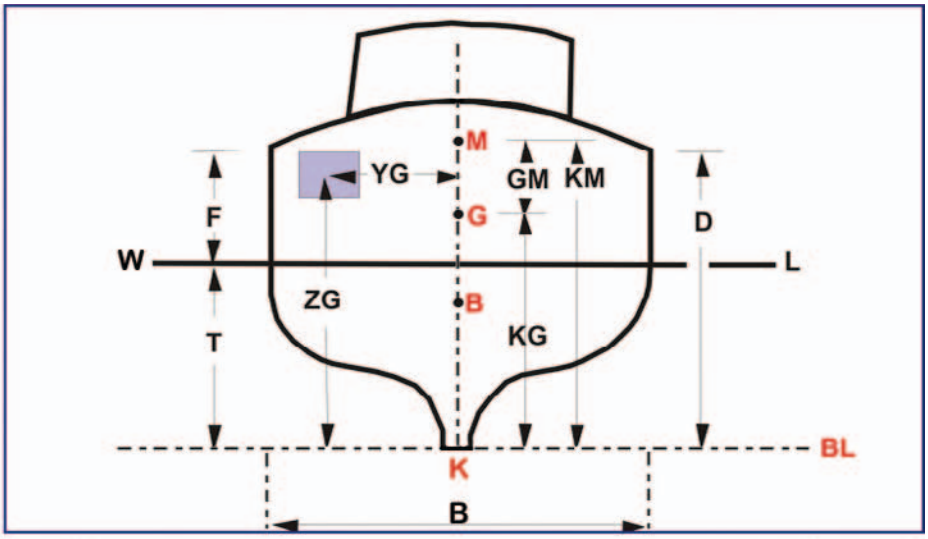
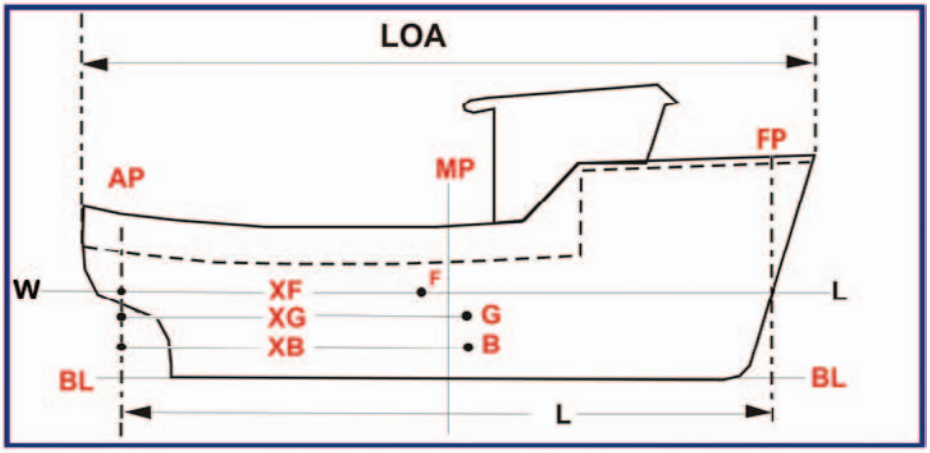
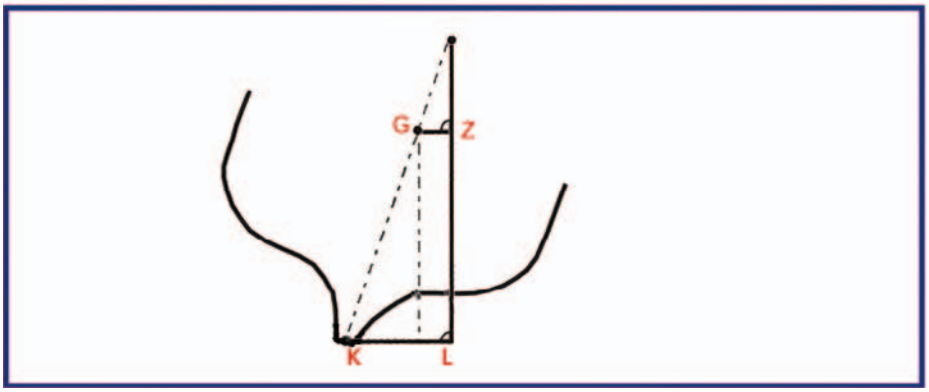
Annex 1. Examples of symbols used in stability documentation







Annex 2. Terms and symbols

Term	Symbol	Page
After perpendicular	AP	7,39,45
Baseline	BL	7,39,45
Breadth	B	45
Buoyancy		7
Centre of buoyancy	B	7
Centre of floatation	F	45
Centre of gravity	G	6
Centreline	CL	
Cross curves		38
Deadweight	DW	4
Density	ρ	
Depth	D	45
Displacement (or displacement volume)	DISV	3
Displacement mass	DISM	4
Dynamic stability		21
Equilibrium		10
Forward perpendicular	FP	7,39,45
Free surface effect		13,26
Freeboard	F	3,26,45
Freeing ports		14,26
Gravity		6
GZ-curves		19
Heel		5
Heel angle		19,20,22,35,40
Hydrostatic curves		38
Keel	K	6,45
Length (usually Lpp)	L	45
Length over all	LOA	45
Light ship weight		4
List		5
Loll		5
Metacentre	M	8
Metacentric height	GM	10,45
Mid between perpendiculars (amidships)	MP	7,39,45
Moment to change trim one centimetre	MTC	38

Annex 3. Test on fishing vessel stability

1	Heel	Is the heel the inclination of a vessel: a) by an external force? OR b) by movement of weight within the vessel?
2	Deadweight	Is the deadweight: a) the weight of water a vessel displaces? OR b) the actual weight that a vessel carries when loaded?
3	Draught	Is the draught: a) the vertical distance from the waterline to the working deck? OR b) the vertical distance from the waterline to the keel?
4	Centre of gravity	Is the centre of gravity the point at which the whole weight of a body is said to act: a) vertically downwards? OR b) vertically upwards?
5	Centre of buoyancy	Is the centre of buoyancy: a) the point through which the force of buoyancy is said to act vertically downwards? OR b) the geometric centre of the underwater section of the vessel?

6	A stable vessel	Is a vessel in stable equilibrium when the metacentre is: a) above the centre of gravity? OR b) in the same position as the centre of gravity?
7	Free surface effect	Is the free surface effect eliminated: a) when all tanks are full? OR b) when all tanks are empty?
8	Righting lever	Is the righting lever: a) the horizontal distance between the centre of gravity and a vertical line through the centre of buoyancy when a vessel is heeled? OR b) the GZ?
9	Free surface effect	Is the free surface reduced: a) by subdividing tanks? OR b) by keeping tanks half full?
10	Stiff vessel	Is a stiff vessel a vessel with: a) a large metacentric height? OR b) a small GM?
11	Tender vessel	Is a tender vessel a vessel with: a) a large GM? OR b) a small metacentric height?
12	Fish on deck	Do fish on deck: a) increase the stability of the vessel? OR b) decrease the stability of the vessel?

13	Freeing ports	Should freeing ports: a) be blocked and only cleared when needed? OR b) always be clear?
14	Heavy weights at high points	Do heavy weights at high points: a) decrease the GM? OR b) increase the stability of the vessel?
15	Icing	Is icing an accumulation of ice which: a) reduces the freeboard of a vessel and its stability? OR b) increases the deadweight and stability of the vessel?
16	Alterations to vessels	Should a fishing vessel owner report to the competent authority alterations to his vessel: a) before the alterations are undertaken? OR b) after the alterations are undertaken?

ANSWERS TO TEST

1 a); 2 b); 3 b); 4 a); 5 b); 6 a); 7 a) and b); 8 a) and b); 9 a); 10 a); 11 b); 12 b); 13 b); 14 a); 15 a); 16 a).

Annex 4. Documentation consulted

FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels, Part A – Safety and Health Practice, 2005

The revised version of part A of the Code is directed primarily towards competent authorities, training institutions, fishing vessel owners, representative organizations of the crew, and non-governmental organizations having a recognized role in crewmembers' safety and health and training.

FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels, Part B- Safety and Health Requirements for the Construction and Equipment of Fishing Vessels, 2005

The revised version of part B of the Code is directed primarily towards shipbuilders and owners, containing requirements for the construction and equipment for fishing vessels of 24 metres in length and over

FAO/ILO/IMO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, 2005

The purpose of the Voluntary Guidelines is to provide an updated, general guidance on safe practices for the design, construction and equipment of smaller fishing vessels i.e. fishing vessels of 12 metres in length and over but less than 24 metres in length

The 1993 Torremolinos Protocol and Torremolinos International Convention for the Safety of Fishing Vessels (Consolidated edition, 1995)

This publication contains the regulations for the construction and equipment of fishing vessels of 24 metres in length and over

Code on Intact Stability for All Types of Ships covered by IMO Instruments (resolution A.749(18), as amended)

This publication provides in a single document recommended provisions relating to intact stability, based on existing IMO instruments

Recommended Practice on Portable Fish-Hold Divisions (resolution A.168(ES.IV), as amended by resolution A.268(VIII), appendix V)

This resolution contains formulae for scantlings of portable fish-hold divisions

Model Loading and Stability Manual (MSC/Circ. 920)

This document provides guidance on the preparation of stability documentation, using a uniform layout as well as agreed terms, abbreviations and symbols, which are important for the correct use of such documentation.

BOBP/MAG/16 - A safety guide for small offshore fishing boats

This publication provides information to boatyards, boat owners and crew on the design and operational aspects related to the safety of decked fishing boats of less than 12 m in length.

This document introduces some basic principles on the stability of small fishing vessels and provides simple guidance on what fishing vessel crews can do to maintain adequate stability for their vessels. It is not intended to be a complete course on fishing vessel stability. The publication is aimed at fishers and their families, fishing vessel owners, boatbuilders, competent authorities and others who are interested in the safety of fishing vessels and fishers. It may also serve as a guide for those concerned with training in matters of safety of fishing vessels.

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