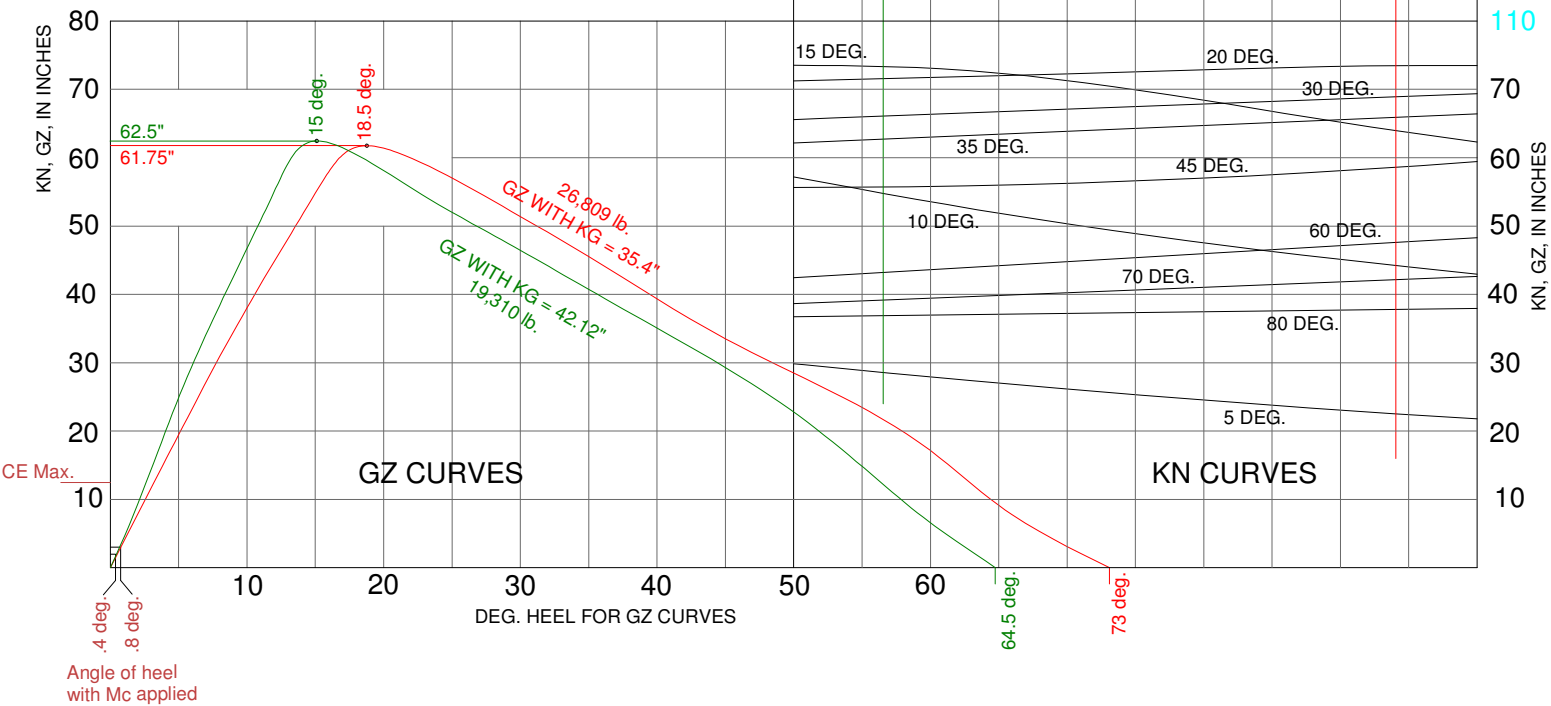
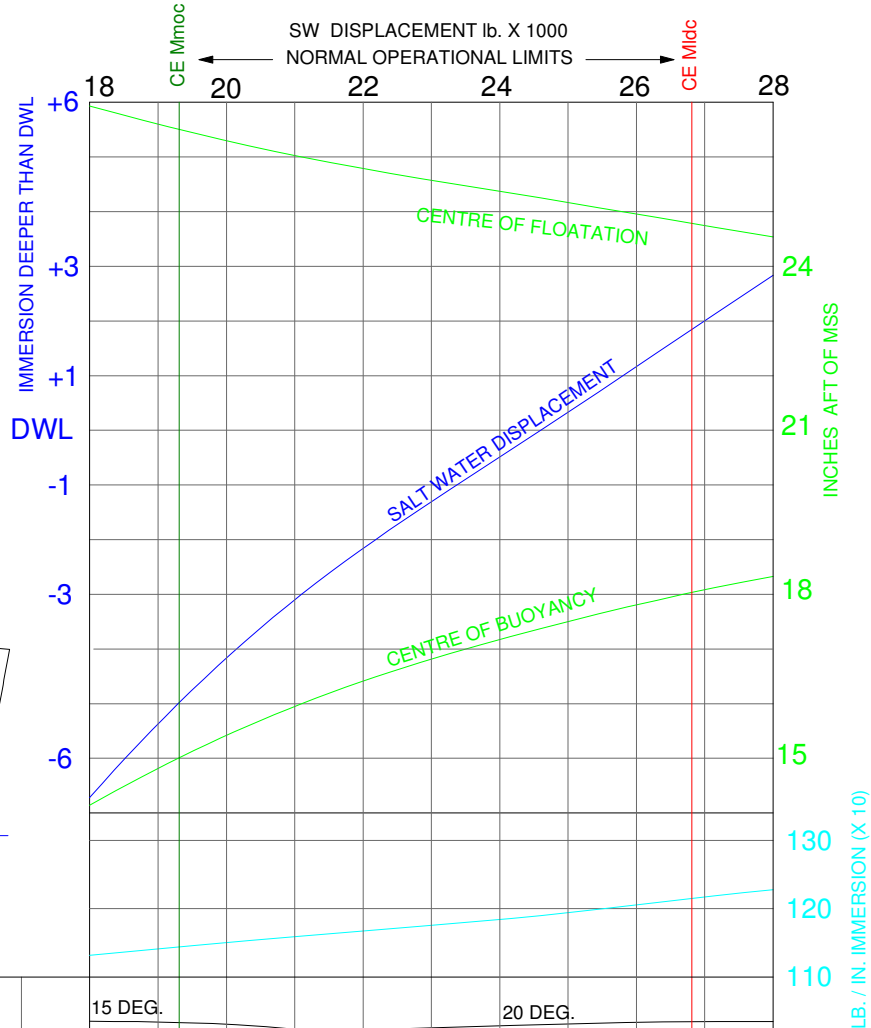
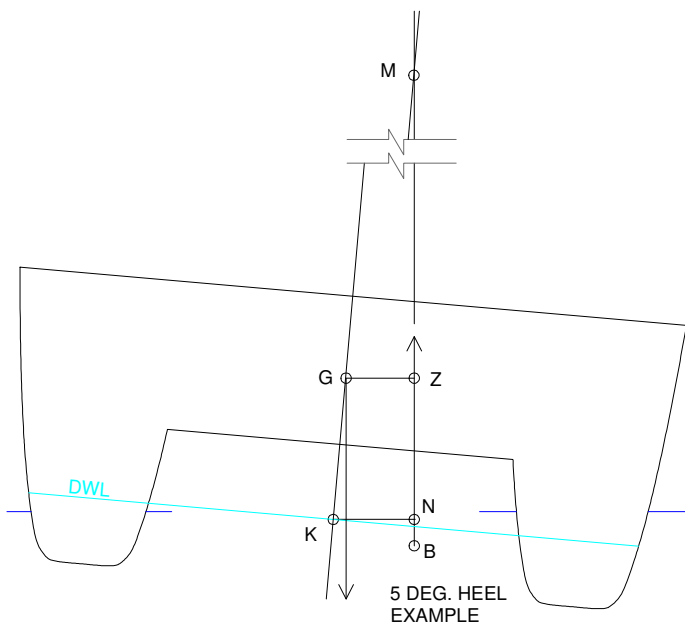


WHEN THE VESSEL IS AFLOAT AND STATIC, THE FORCES OF GRAVITY AND BUOYANCY HAVE THE SAME VALUE AND ARE IN VERTICAL ALIGNMENT.
 WHEN THE VESSEL IS HEELED BY AN EXTERNAL INFLUENCE, WIND OR WAVES, THE FORCES MOVE OUT OF ALIGNMENT.
 "GZ" REPRESENTS THE LEVER ARM FOR THE BUOYANT EFFORT THAT WORKS TO ROTATE THE VESSEL BACK AND RECOVER THE ALIGNMENT.
 THE LEVER ARM LENGTH (GZ) MULTIPLIED BY THE FORCE (BUOYANCY OR GRAVITY) IS THE "RIGHTING MOMENT" EXPRESSED IN FOOT POUNDS AND GRAPHED ON SHEET 3



DWL - Design Water Line (datum)

MSS - Midships Station (X=0 for Model)

M - Initial Transverse Metacenter

B - Centre of Buoyancy

G - Vertical Centre of Gravity

K - Datum for Vessel "Keel"

GZ - Righting Arm

Mc - (CE) Crew Heeling Moment

Righting Moment = GZ x Displacement

mMOC - (CE) Mass at Minimum Operating Condition

mMLDC - (CE) Mass at Maximum Load Condition

I_L - Longitudinal Second Moment of Water Plane

V - Volume of Submerged Hull

M_L - Longitudinal Metacenter

Note: "CE" Items are generated in accordance with ISO Standard 12217-1:2002 (E), Small Craft Stability and Buoyancy Assessment

Moment to trim 1" = Displ. x BM_L / LWL
 = 1322 ft lb. (on DWL)

$BM_L = I_L / V$

PDQ MV41 HYDROSTATICS AND STABILITY CURVES

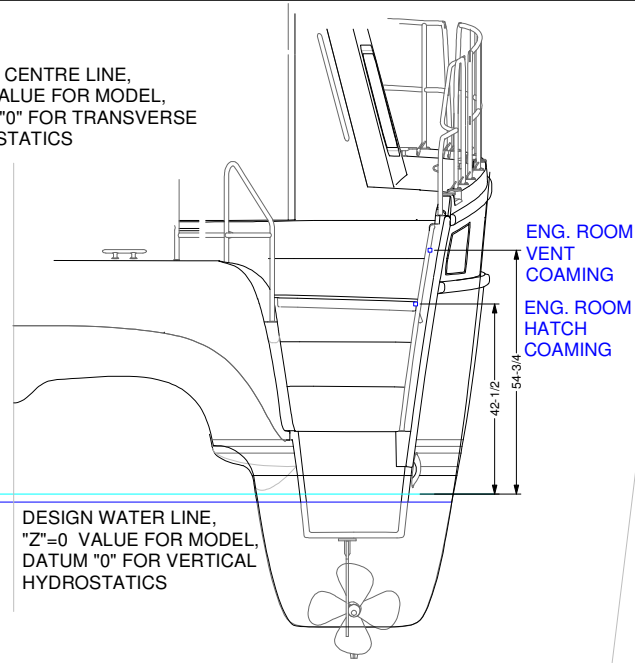
IF THE VESSEL IS HEELED SUFFICIENTLY TO IMMERSE NON-WATERTIGHT OPENINGS, "DOWNFLOODING" MAY OCCUR AND DIMINISH THE BUOYANT FORCE. THE ANGLE AT WHICH THIS OCCURS IS THE PRACTICAL LIMIT FOR THE CALCULATION OF SURVIVABILITY.

DUE TO DYNAMIC FORCES, ACTUAL VESSEL MOTIONS ARE UNPREDICTABLE AND THE CALCULATIONS NEED TO DEMONSTRATE A LARGE OF RESERVE OF POSITIVE STABILITY FOR SAFE OPERATION.

DESIGN CENTRE LINE,
"Y"=0 VALUE FOR MODEL,
DATUM "0" FOR TRANSVERSE
HYDROSTATICS

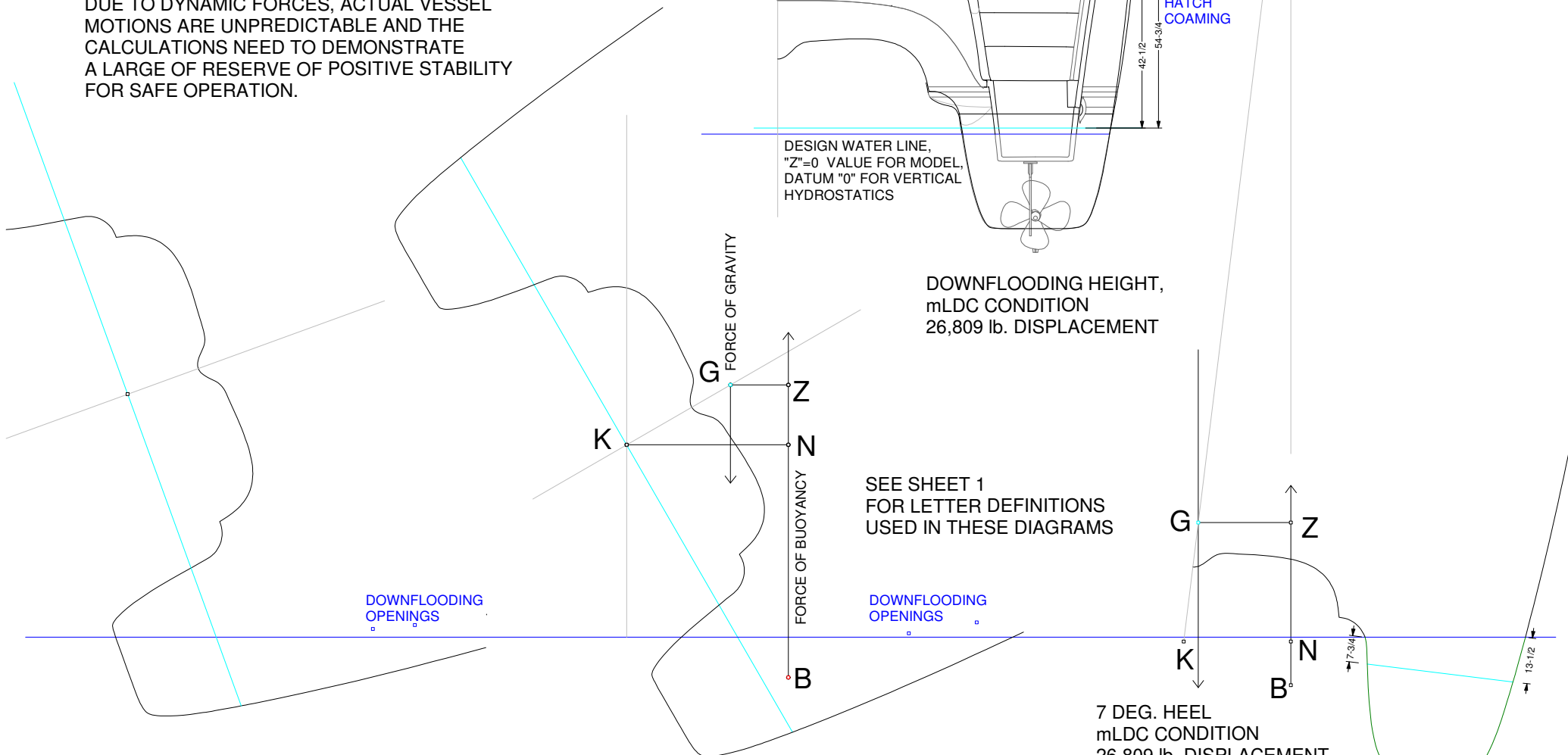
M

INITIAL METACENTRIC
HEIGHT (GM) = 271", 22' 7" +/-



DESIGN WATER LINE,
"Z"=0 VALUE FOR MODEL,
DATUM "0" FOR VERTICAL
HYDROSTATICS

DOWNFLOODING HEIGHT,
mLDC CONDITION
26,809 lb. DISPLACEMENT

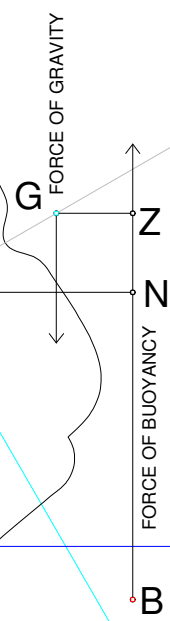


70 DEG. HEEL
mMOC CONDITION
19,310 lb. DISPLACEMENT

60 DEG. mLDC
60 DEG. HEEL
mLDC CONDITION
26,809 lb. DISPLACEMENT

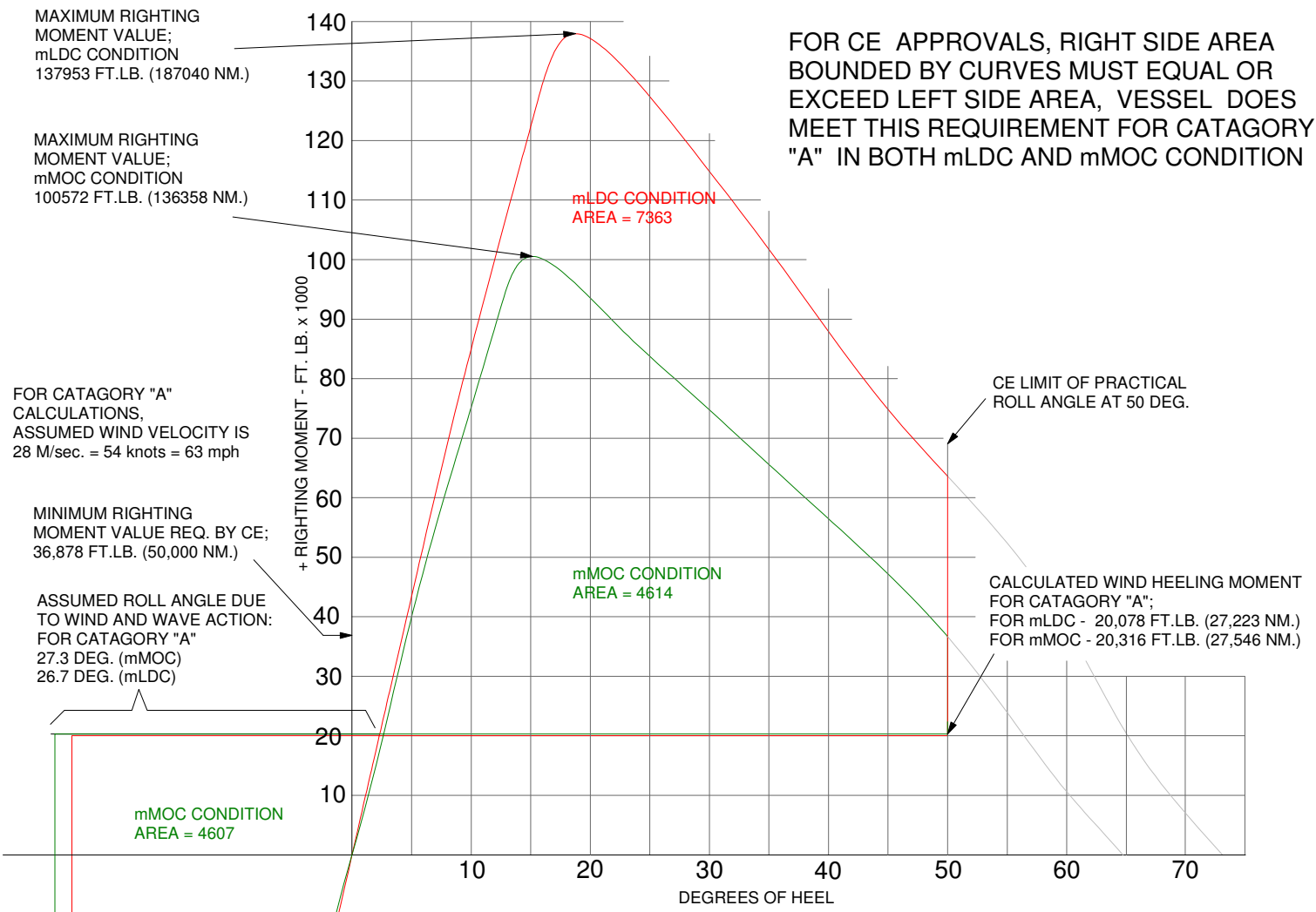
7 DEG. HEEL
mLDC CONDITION
26,809 lb. DISPLACEMENT

SEACOCK EQUIPPED
THROUGH HULLS REQ.



SEE SHEET 1
FOR LETTER DEFINITIONS
USED IN THESE DIAGRAMS

PDQ MV41 HYDROSTATICS AND STABILITY CURVES



**RIGHTING MOMENTS FOR 26,809 lb. DISPLACEMENT,
(CE mLDC CONDITION)**

**RIGHTING MOMENTS FOR 19,310 lb. DISPLACEMENT,
(CE mMOC CONDITION)**

PER ISO 10240:2004-
A CATAGORY "A" CRAFT IS DESIGNED TO OPERATE IN WINDS THAT MAY EXCEED FORCE 8 ON THE BEAUFORT SCALE WITH SIGNIFICANT WAVE HEIGHTS OF 4m (13') AND ABOVE AND BE LARGELY SELF SUFFICIENT. SUCH CONDITIONS MAY BE ENCOUNTERED ON EXTENDED VOYAGES ACROSS OCEANS OR INSHORE WHEN UNSHELTERED FROM THE WIND AND WAVES FOR SEVERAL HUNDRED MILES. ABNORMAL CONDITIONS SUCH AS HURRICANES ARE EXCLUDED.

THE SIGNIFICANT WAVE HEIGHT IS THE MEAN HEIGHT OF THE HIGHEST ONE THIRD OF THE WAVES, WHICH APPROXIMATELY CORRESPONDS TO THE ESTIMATES OF AN EXPERIENCED OBSERVER. SOME WAVES WILL BE DOUBLE THIS HEIGHT.

PDQ MV41 HYDROSTATICS AND STABILITY CURVES