命令模式

CRTpt [(n)] "description", l, t, v [/SYmmetrical] [/FLood | /TIght | /NOflood]
        [/TAnk: tankname] [/INside: tankname] [/OPening: size]

Defines a Critical Point (used to mark a point of flooding or other location whose distance to the waterplane is of interest).

定义关键点（可用来标记进水点或用于考察到水面距离的点）。

CRTpt (n) [*±] d

Moves a critical point up or down relative to the current waterplane.

相对于当前水面向上或向下移动关键点。

CRTpt [(n)] OFF

Deletes one or all Critical Points.

删除一个或全部关键点。

CRTPT (n) dvar [,lvar [,tvar [,vvar]]] /ACCESS

Accesses a Critical Point's data into the named variables.

赋予进水点的数据给已经定义的变量。

CRTpt [(n)] [REPort]

Displays the locations of one or all Critical Points (screen only unless REPORT is included).

显示一个或所有关键点的位置（只是屏幕显示，除非出现 REPORT）。

参数说明

(n)

The number assigned to the Critical Point, in the range $1 \leqslant n \leqslant 400$.

进水点的编号，编号范围 $1 \leqslant n \leqslant 400$。

"description"

Up to 25 characters describing or naming the point; must be enclosed in quotation marks if more than one word.

关键点的描述或命名，最多 25 个字符，如果多于一个单词，必须用双引号引起。

l, t, v

Longitudinal, transverse, and vertical coordinates to be assigned to the Critical Point. MIN or MAX can used in place of t to specify the minimum (portmost) or maximum (starboardmost) values at the given l and v on the surface of the vessel. Likewise MIN or MAX can be used in place of v for the lowest or highest displacer points at given l and t. PMIN and PMAX act like MIN and MAX but only consider components with positive effectiveness.

关键点的纵向，横向和垂向坐标位置。MIN 或 MAX 可以代替 t，来表示取值于 l 和 v 确定的船舶外表面的横向最左端（MIN）或最右端(MAX)。同样的，MIN 或 MAX 可以代替 v，来表示取

值于 l 和 t 确定的船舶外表面的最下端（MIN）或最上端(MAX)。PMIN 和 PMAX 作用方式与 MIN 和 MAX 相同，但它们只考虑了构部件且只取正值。

/SYMMETRICAL

Indicates that the given Critical Point is to represent two points, the other being its mirror image on the other side of the vessel.

表示定义的关键点会代表两个点，另一个为根据纵坐标镜像到另一舷的对称点。

/FLOOD

Designates an unconditional point of downflooding (default).

表示此关键点为无任何保护的进水点（默认）。

/TIGHT

Indicates that the point is a weathertight flooding point.

表示此关键点为风雨密点。

/NOFLOOD

Indicates a point which is not related to flooding at all.

表示此关键点为非进水点。

/TANK: tankname

Links the named tank in order to disable the point for flooding whenever the tank is already FLOODED or DAMAGED. Moreover, the reference point of any DAMAGED, SPILLING, or DECK type tank is automatically set to the location of its lowest linked critical point, ignoring those disabled by /INSIDE.

命名的舱室组合，以便在舱室已经进水或损坏时禁用进水点。此外，任何损坏、溢出或甲板型的参考点都会自动设置为其最低连接临界点的位置，忽略那些被 /INSIDE 禁用的内部进水点。

/INSIDE: tankname

Designates a tank in which the flood point resides, disabling it unless the containing tank is of type FLOODED or DAMAGED.

指定进水点所在的舱室，除非舱室在进水 FLOODED 或破损 DAMAGED 时，这个进水点才起作用。

/OPening: size

Declares an opening size (square length units) to be used in load Flow calculations. See the LOAD FLOWC command.

设定开口的大小（面积单位），用于装载流入计算，查看命令 LOAD FLOWC。

d

The distance to move up or down perpendicular to the waterplane.

垂直于水面升高或下降的高度。

dvar, lvar, tvar, vvar

The names of variables (declared by the VARIABLES command) used to access the Critical Point's description and coordinates. Asterisks can placehold for any unneeded variable names.

赋予进水点信息的变量名（在 VARIABLES 命令下定义）。通配符"*"可以与任何不需要的变量使用。

/ACCESS

Accesses a Critical Point's data into variables without making changes

将进水点的参数赋予变量。

Notes:

注意:

The height of Critical Points relative to the waterplane (wave included) is shown by the STATUS and RA commands. The HEIGHT command can be used to set the waterplane or access a critical point's height relative to the waterplane (wave not included)

命令 STATUS 或 RA 会显示关键点距离水面的垂直距离（考虑浪高）。HEIGHT 命令可以用于设定水线面或进水点到水线面的垂直距离（不考虑波浪）。

Critical Points are not required in order to track the deck edge or margin line immersion. A margin line can be defined in Part Maker using the MARGIN command.

关键点并不用于考察甲板边缘入水情况。甲板边缘可以在 Part Maker 模块下用命令 MARGIN 定义。

CRITpt is an acceptable alias for CRTPT.

CRITpt 也可以拼写为 CRTPT。

Operation

操作

If a description and point coordinates are given, the nth Critical Point is defined (or redefined). If (n) is missing, then the first available unassigned Critical Point number is used.

如果给定描述和坐标位置，那么第 n 个关键点就被定义或被重新定义。如果参数 n 被省略，那么默认最小的未使用过的编号被会分配到给此点。

The location of the Critical Point may be anywhere on or off the vessel.

关键点的位置可以在船上或船外的任何位置。

If (n) is omitted when deleting or displaying Critical Points, all Critical Points are deleted or displayed.

当删除或显示关键点时，如果省略参数 n, 那么所有的关键点将会被删除或显示。

Each critical point has a Symmetry status and a Flooding status.

每一关键点都有对称状态和进水状态。

The Symmetry status indicates whether the point is to be regarded as the single point represented by it coordinates or as actually two points (one symmetrically opposite the other by negation of the transverse coordinate). Symmetry status is determined by the presence or absence of the /SYMMETRICAL parameter.

参数/SYMMETRICAL 表示关键点的对称状态。如果含有参数/SYMMETRICAL，表示这个关键点代表了关于纵坐标轴对称的两个点。如果不含有参数/SYMMETRICAL，就定义了单一关键点。

The Flooding Status may have one of three values: FLOOD, TIGHT or NOFLOOD as determined by the corresponding parameter when the point is defined. In the absence of a flooding status parameter, FLOOD status is assumed.

进水状态有三种状态表示： FLOOD 进水点， TIGHT 风雨密点，或 NOFLOOD 非进水点，在设定关键点时，用对应参数设定。若不设定进水状态，默认此关键点为进水点。

FLOOD means that the point will be regarded as a downflooding point as referenced by the FLD keyword in the LIMIT command and the DAMSTAB command. However, the point is disabled for flooding if /TANK: name is present and the named tank is flooded or damaged.

FLOOD 表示此关键点为进水点，在命令 LIMIT 或 DAMSTAB 中，会被关联到关键字 FLD。如果出现参数/TANK: name，则当对应舱室已经为进水或破损状态时，那么此关键点在计算时会被忽略。

TIGHT is similar to FLOOD but it applies only when the vessel is at the initial equilibrium angle. At other heel angles, a TIGHT Critical Point is considered to be nonflooding.

TIGHT（风雨密点）和 FLOOD 相似，但风雨密点只适用到船舶浮态平衡角度。在其他角度下，此点被认为是非进水点。

NOFLOOD means that the point is ignored in reference to flooding.

NOFLOOD 表示此点为非进水点，并不参与到任何进水计算中。

The /INSIDE: tankname parameter is useful for guarding against insufficient stability prior to progressive flooding, without being penalized when the interior flood points are not exposed.   It is also significant with respect to the operation of LOAD FLOWC and TANKS /FLD.

子参数/INSIDE: tankname 使得对应关键点在没暴露之前，并不参与到稳性计算中。这样可用于在累进进水之前，守住一些稳性。当涉及 LOAD FLOWC 和 TANKS /FLD 计算时，这个参数的设置也很重要。

The /OPENING: size parameter is required along with /TANK: tankname before a downflooding point can be used by the LOAD (tankname) FLOW command.

子参数/OPENING: size 需与子参数/TANK: tankname 连用来设置进水点，进而为命令 LOAD (tankname) FLOW 所调用。

Display Output

显示输出

Display mode is activated when no parameters beyond (n) are given. For example,

当没有给定子参数(n)以外的参数时，显示模式会被启用。例如：

  CRTPT(1)

lists the first Critical Point coordinates on the screen only (unless REPORT is included). No height information is given and the waterplane need not be defined (depth may be undefined).

只是屏幕显示第一个关键点的坐标位置（除非附加参数 REPORT，否则不会生成报告）。它距离水面的高度信息并不会给出，且也不需要定义水线面（原点深度 depth 可以不定义）。

For output to disk or printer, use the STATUS CRTPT command. Here all critical points are shown along with their heights above the water (respecting waves).

利用 STATUS CRTPT 命令，会将关键点信息输出到报告或打印，这里会显示所有关键点相对水线面（考虑波浪）的高度信息。

When heights are given, symmetrical points are shown individually, since their heights may differ. When heights are not shown, a symmetrical point can be identified by the lack of a side suffix following the transverse coordinate.

当给定高度信息时，对称状态的关键点中镜像对称的两个点会分别显示，因为它们的高度可能不同。当不显示高度时，对称状态的关键点可根据其横坐标中无明确的左右舷后缀来识别。

The Flooding status is always shown following the description. If the Critical Point is disabled by the /TANK or /INSIDE parameter, then an "X" is prefixed to the status name, so it is shown as "XFLOOD" or "XTIGHT".

进水状态总是附加在关键点描述后显示，当因使用了子参数/TANK 或 /INSIDE 而导致进水点失效时，那么显示的进水状态前会加前缀"X"，例如"XFLOOD" 或 "XTIGHT"。

Nondisplay Output:

无显示输出

none.

无

Examples

样例

Showing all Critical Point Coordinates:

显示所有关键点的位置：

  CRT

Setting Critical Point 3, port and starboard:

设定左右舷对称的 3 号关键点：

  CRIT (3) "Cockpit scupper" 57.5, 2.25, 7.44 /SYMMETRICAL

Deleting Critical Point 3:

删除 3 号关键点：

>   **CRT (3) OFF**

Setting the next available Critical Point as weathertight:

设定接下来的关键点为风雨密点：

>   **CRTPT "Tight door at FR 12" 143, 14.5, 16.44 /TIGHT**

Setting the next Critical Point to a location on the hull's starboard surface:

设定接下来的关键点的位置在船体右舷表面：

>   **CRTPT "Hull Surface at FR 2" 20.5, MAX, 12.7 /NOFLOOD**

Moving Critical Point 4 down 1.25 length units relative to the waterplane:

把 4 号关键点相对于水面根据当前单位向下移动 1.25：

>   **CRTPT (4) *-1.25**

Deleting all Critical Points:

删除所有的关键点 5：

>   **CRTPT OFF**

Accessing the coordinates of Critical Point 4 by setting them to variables:

将进水点 4 的参数赋予给变量：

>   **VARIABLE L, T, V**
>   **CRTPT (4) *, L, T, V /ACCESS**