

命令模式

WEight [(TOTAL)] w [,lcg [, tcg, vcg]] [/POINT]
 [/GYRadius: lr, tr, vr[, tv, vl, lt] | OFF] [/BOX: l, w, h] [/NOWARN]
 Sets the Fixed Weight (and, optionally, its center).

设置固体重量（和重心位置，可选项）

WEight d1 @ l1, ..., dn @ ln [,tcg, vcg]
 [/GYRadius: lr, tr, vr[, tv, vl, lt] | OFF] [/BOX: l, w, h] [/NOWARN]
 Sets the Fixed Weight longitudinally distributed.

设置带有沿纵向重量分布的固体重量

WEight *
 Combines all added weights with the Light Ship.

将所有增加的重量组合到空船重量中

WEight REPort [/ALL] [/NOTab] [/PROfile | PLAN]
 Reports the Light Ship weight or Fixed Weight distribution (requires the LS module).

报告空船重量或固定重量的分布(需要 LS 模块)。

参数说明

(TOTAL)
 When present, indicates that the Total Weight is being set, including tank weights. Otherwise only the Fixed weight is set to the given value.

用于设置总重量，其中包括舱室中装载的重量。否则只是设置固体重量为所给值。

w
 The weight in current weight units.

重量，单位参照当前的重量单位。

lcg, tcg, vcg
 The longitudinal, transverse and vertical coordinates, in current length units, of the center of gravity. Since these parameters are not otherwise identified, they must be given in this order. If absent, the current values remain. MIN or MAX can used in place of tcg to specify the minimum (portmost) or maximum (starboardmost) values at the given lcg and vcg on the surface of the vessel. Likewise MIN or MAX can be used in place of vcg to for the lowest or highest displacer points at given lcg and vcg. PMIN and PMAX act like MIN and MAX but only consider components with positive effectiveness.

纵向，横向和垂向的重心坐标位置，即 x,y,z ，单位为当前长度单位。因这些参数不可能自动识别，所以设置数值时一定要按照纵向 lcg，横向 tcg 和垂向 vcg 的顺序给定。如果省略，则保持当前数值不变。MIN 或 MAX 可以代替 tcg，来表示在给定 LCG，VCG 处的船表面，最左舷或最右舷位置。同理，MIN 或 MAX 也可以代替 vcg，来表示排水类子模型，在给定 LCG，

TCG 处最下端或最上端位置；PMIN 和 PMAX 同 MIN 和 MAX 作用相似，但它只考虑了，起积极作用的构部件。

/POINT,

The presence of this parameter forces an existing weight distribution curve to be replaced by the point weight. Otherwise, the distribution would be modified to agree with the given weight and center.

它代表使用点重量来代替已经存在的分布曲线的重量，否则重量分布曲线将修订为与设定的重量和重心一致。

/GYRADIUS: lr, tr, vr [,tv, vl, lt] | OFF

Specifies the Light Ship's radii of gyration (and optional signed product of inertia gyradii) around its own CG. The GF keyword approximates lr gyradius using 40% beam for roll, and tr or vr using 25% length for pitch or yaw; LOA and WOA are taken from the Geometry File as assigned by Part Maker, or else from the bounding box for all parts. When a longitudinal distribution is present, its inertia is automatically calculated and used by default (absent /GYR and /BOX) or for individual gyradii where * is given; since typical weight distributions do not provide information for roll gyradius, a common method is to combine the 40% beam estimate with pitch and yaw values from the distribution using /GYR:GF,*,*. If turned OFF, the Light Ship has no inertia, even around total vessel CG. Seakeeping requires non-zero weight gyradii (see the SEAKEEPING command).

指定空船围绕其自身 CG 的回转半径（以及惯性回转的可选符号乘积）。GF 关键字使用 40% 的横摇，使用 25% 的长度进行俯仰或偏航，近似 lr gyradius; LOA 和 WOA 取自 PART MAKER 指定的几何文件，或者取自所有部件的边界框。当存在纵向分布时，其惯性会自动计算并默认使用（不存在 /GYR 和 /BOX）或用于给出 * 的单个回半径；由于典型的重量分布不提供横摇回转半径的信息，因此常用方法是使用 /GYR: GF, *, * 将 40% 波谱估计值与分布中的俯仰和偏航值相结合。如果关闭，空船没有惯性，即使在船 CG 周围也是如此。适航需要非零重量回转（参见 SEAKEEPING 命令）。

/BOX: length, width, height

Specifies rotational inertia of the Light Ship evenly distributed over the given box shape, ignoring any longitudinal distribution except from individual dimensions where * is given.

指定空船船的旋转惯量均匀分布在给定的方框形状上，忽略除给定 * 的单个维度之外的任何纵向分布。

/NOWARN

Avoids warning messages when the Light Ship weight changes.

当改变空船重量时，避免警告信息出现。

di

Weight density (weight per unit length) at the location li.

在 li 位置的重量密度（单位长度的重量）。

li

The longitudinal location at which the preceding weight density applies. The integration of the d values over l gives the Fixed Weight and the corresponding longitudinal center of gravity.

在前面重量密度设定中使用的纵向位置，通过船长方向的重量密度的设置也就设定了固体重量和纵向方向的重心位置。

/ALL

Reports all added weights, in addition to the Light Ship.

报告除空船外的所有添加的固定重量。

/NOTAB

Omits tabular data, just including the plot.

省略表格数据，仅包括绘图。

/PROFILE | PLAN

Includes the vessel profile or plan on plots.

绘制船体侧视图或平面图

Definition: The Fixed weight is the total vessel weight less the contents of all explicitly modeled tanks. Fixed Weight can also be set with the SOLVE and GMTMMT commands.

定义：固体重量是船舶总重不包含舱室内装载的重量。固体重量也可以通过 SOLVE 和 GMTMMT 命令设置。

Operation

操作

The Total Weight or Fixed Weight (and, optionally, the center) is set to the given value. If added weights are in existence (see the ADD command) or tank loads are present and the (TOTAL) parameter is present, then the weight and center of gravity of the Light Ship are adjusted in order to achieve the given weight and center.

设置总重量或固体重量（和重心，非必选）。如果存在已增加的重量（参看 ADD 命令），舱室装载重量或出现参数 TOTAL，则会调节空船重量以匹配设定的重量和重心位置。

The weight value may be given directly - as a point weight - or indirectly as a weight distribution ($d1 @ l1$, etc.). If a point weight is given, it may be followed by a longitudinal center and then by transverse and vertical centers. If the weight distribution is given, it implies a longitudinal center also, and it may be followed by values of tcg and vcg as well.

重量数值可以通过直接定义点重量或间接定义重量分布来设定。如果定义了点重量，其重心位置也可以随之定义。如果定义了重量分布，也就包含了纵向的重心位置 l_{cg} ，其横向重心位置 tcg 和垂向重心位置 vcg 也可以在其后定义。

Several weights may be combined by separating them with semicolons. For example, 可以将用分号分开的几个重量组合在一起，例如：

WEIGHT 1234, 12.55a, 0, 14.44; 234.5, 0.3f, 0.75p, 21.25

combines two weights to arrive at the Fixed Weight and center of gravity. The same technique may be used to combine a series of distributed weights. Distributed and point weights may also be combined.

组合两个重量来得到固体重量和重心位置。此方法也可以组合一系列的分布重量。分布重量和点重量也可以组合在一起。

The weight distribution is actually weight density (eg. tons per foot) as a piecewise-linear function of longitudinal location. When giving distributed weights, the order in which they are given does not matter (they are automatically sorted into bow-to-stern order) unless two weight density values occur at the same location (a step). In this case, the order remains as given.

重量分布实际上就是重量密度（如吨每英尺）在纵向方向上的线性变化。当定义重量分布时，其定义的位置顺序没有关系（会自动保存为船艏到船艉的顺序），除非在同一位置出现两个重量密度。如果这样，会使用设定的顺序。

A special technique is available for making incremental adjustments to the weight or CG, or for setting one or more values while leaving the others alone: An asterisk can be used for any of the parameters. The asterisk, in this case, means "use the current weight or CG coordinate". Further, if a number is appended to the asterisk, the current value, adjusted by that amount, is used. For example,

有一种特殊方法可以通过增减来调节重量和重心位置，或设定一个或多个值而保留其余的值不变：用星号*来代表任何的参数。它表示使用当前设置的重量或重心位置。如果某值附属在某星号*的后面，那么原有值根据这个值修订后就是当前值，例如：

WEIGHT *, *, *, *+0.1

raises the Fixed-Weight CG by 0.1. There cannot be any spaces between the asterisk and the incremental value following it.

固体重量的垂向重心位置增加 0.1，星号*以及它后面的修订数值间不可以留空格。

Asterisks are not allowed with weight distributions or combined weights except when making incremental adjustments.

不允许使用星号进行重量分布或组合重量，除非进行增量调整。

A special case occurs when the only parameter is an asterisk. The result is to combine all added weights, except those whose descriptions begin with "*" or "+", into the Light Ship. If the result is an entirely cleared added-weight list, the "Light Ship" term becomes, simply "Weight" or "Fixed Weight".

另一种特殊方法是参数中只有星号*。那么所有除了以“*”和“+”开头的增加的重量将会被组合为空船重量。如果所有增加重量都没有以“*”和“+”开头，则报告中的用词"Light Ship"将会变为"Weight" 或 "Fixed Weight"。

Restrictions with ADDED weight distributions:

当增加重量为分布重量时的限制

The WEIGHT command cannot be used (in either mode) when added weights with weight distributions are present (see the ADD command). The reason for this is that the WEIGHT command sets the Light Ship weight and CG to the difference between the given total Fixed Weight and the sum of the added weights. It is impossible to construct a unique Light Ship weight distribution curve from this information.

当有增加重量为分布重量时，WEIGHT 命令（任何模式）将不可以使用。因为 WEIGHT 命令通过给定的总固体重量和所有增加重量来设置空船重量和重心。当有增加重量为分布重量时，将不能得到唯一的空船重量分布。

When weight distributions are being specified, the WEIGHT command should be used first, followed by the ADD commands. (To delete all ADDED weights, use the DELETE ALL WEIGHTS command.)

当需要设置重量分布时，应该先用 WEIGHT 命令，然后使用 ADD 命令。（删除增加重量时用 DELETE ALL WEIGHTS 命令）

If a weight distribution already exists when the WEIGHT command is given, it is modified to agree with the given weight (and LCG, if present). However, if the /POINT parameter is present, the distribution is discarded and replaced by a point weight.

当已经存在一个重量分布时，用 WEIGHT 命令设定重量，则此重量分布会被修正，以匹配设定的重量（和 LCG,如果出现）。然而，如果出现参数/POINT，定义的点重量会代替分布重量。

In modifying a weight distribution, the weight density values are multiplied by a constant factor and their locations are changed by a constant amount such that the area under the density curve equals the given weight and the longitudinal center equals the required LCG.

修正重量分布时，所有重量密度值会乘以一个因数，对应的位置会被移动一个固定的距离，使得新的分布曲线下的面积积分得到的重量重心与设定相同。

Display Output

输出显示

In the REPORT mode, a table is produced with columns for longitudinal location and weight density. Point weights appearing in the weight column are indicated by an asterisk.

在 REPORT 模式中，会生成含有纵向位置和对应的重量密度的表格。点重量在重量表格中用星号*来指出。

Nondisplay Output

无显示输出

WIND REPORT produces a secondary table for weight curve plotting purposes.

WIND REPORT 命令将输出一个绘制重量曲线的次级表格

Examples

样例

Setting the total Fixed Weight:

设置总固体重量

WEIGHT = 987.5

Setting total Fixed Weight and Center of Gravity:

设置总固体重量和重心位置

WEIGHT = 987.5, 56.25, 0, 7.211

Setting Fixed Weight and LCG by means of a pair of weight density curves:

通过一条重量密度曲线设定固体重量和 LCG

**WEIGHT = 5 @ 0, 5.5 @ 7.5, 6 @ 17, 7 @ 27, 7.5 @ 36.25,
7.5 @ 40; 8.65 @ 40, 8.65 @ 145.5;
7.5 @ 145.5, 7.5 @ 225, 6.5 @ 250**

Decreasing Fixed Weight by 50:

使当前的固体重量减少 50

WEIGHT = *-50

Setting the transverse center to port:

设置重量的横向重心位置为左舷 0.25

WEIGHT = *, *, .25P, *

Lumping Fixed Weights together:

将所有固体重量合并到一起

WEIGHT *

Reporting Light Ship weights with the vessel profile drawn on the plot:

生成空船重量报告并且绘制船舶侧视图

WEIGHT REPORT /PROFILE