

命令模式

```
ADD ["description",] [w | RAT | DELta,] [lcg [,t,tcg, vcg]] [/FROM [LIGHT SHIP]]
    [/MAX[:FIRM]:maxw]] [/FIX] [/FREE[Lcg][Tcg][Vcg]] [VRANge:r] [/P]LEN:l1 [,l2]]
    [/PED:loc[:len]] [/NOTE:"note"] [/GYRadius:lr,tr,vr[,tv,vl,lt] | OFF] [/BOX:l,w,h]
    [LPA:lpa[,lca[,vca]]] [USER] [/NOWARN]
```

Adds an item to the Fixed Weight, optionally taking it out of the Light Ship weight.

增加一重量项目到固体重量，也可选择从空船重量中摘取一个重量项目。

```
ADD ["description",] [0;] d1 @ l1, ..., dn @ ln [,t,tcg, vcg] [/VA:v] [/MAX[:FIRM]:maxw]]
    [/FIX] [/FREE[L][T][V]] [VRANge:r] [/NOTE:"n"] [/GYRadius:lr,tr,vr[,tv,vl,lt] | OFF]
    [/BOX:l,w,h] [LPA:lpa[,lca[,vca]]] [USER] [/NOWARN]
```

Adds a distributed weight item to the Fixed Weight.

增加一项分布重量到固体重量。

```
ADD "description", b, lcb, tcb, vcb /GR[:ddo[,ddm]]
```

Adds a buoyant force for modeling ground points. See the GROUND command for the preferred method of defining ground points.

增加一浮力来模拟搁坐点。参看命令 GROUND 所推荐的定义搁坐点的方法。

```
ADD (n), [dv[,ww[,lv[,tv[,vv]]]]] [/LEN:fv,av] [/LPA:lpa[,lcv[,vcv]]] [/PED:lo,ln]
    [GYRadius:lr,tr,vr[,tv,vl,lt]] [BOX:bl,bw,bh] /ACcess
```

Access the nth fixed weight data into the named variables.

将第 n 个固定重量的数据赋予定义的变量中。

```
ADD "description", [ww[,lv[,tv[,vv]]]] [/LEN:fv,av] [/LPA:lpa[,lcv[,vcv]]] [/PED:lo,ln]
    [GYRadius:lr,tr,vr[,tv,vl,lt]] [BOX:bl,bw,bh] /ACcess
```

Access the described item's data into the named variables.

将指定的项目的数据赋予定义的变量中。

```
ADD "description", "[reference]*"
```

Combines referenced weight items into a single item. If reference is omitted before "*", then all weight items (except Light Ship and items whose descriptions begin with an asterisk) are combined into a single point weight item.

把几个重量项目合并为一个项目。如果在 "*" 前省略 reference，那么所有的重量项（除了空船重量和以星号 * 开头的重量项目）都将合并到一个重量项目上。

```
ADD PREFIX [(pn)] ["prefix" [, "label"]]
```

Provides automatic prefixing for subsequent weight descriptions in ADD, DELETE WEIGHT, and CHANGE commands (and also Load Editor weight description entry).

为后续的命令 ADD, DELETE WEIGHT, 和 CHANGE 中涉及重量项目的名称前自动加前缀。（同样在装载编辑器的重量项目中也加前缀）。

```
ADD PREFIX [(pn)] [CURRENT]
```

Makes the stored prefix pn the current prefix.

使存储的第 n 项前缀为当前前缀。

ADD PREFIX (0)

Makes LOAD EDIT and LOAD STATUS show only weights not having defined prefixes.

使 LOAD EDIT 和 LOAD STATUS 中仅显示重量项目，不包含前缀。

ADD PREFIX OFF

Turns off automatic prefixing without affecting the stored prefixes.

关闭自动加前缀，不影响已经存储含前缀的重量项目。

ADD PREFIX (pn) ""

Empties prefix pn or all existing prefixes if an asterisk is used for pn.

清空第 pn 项前缀，或所有存在的前缀，如果使用星号代替 pn。

ADD PREFIX [(pn)] pvar [,lvar] /ACces

Accesses data for prefix pn into the named variables. or empty if none.

将前缀 pn 的数据赋值到命名的变量中。如果没有，则为空。

ADD PREFIX

Displays (screen only) the currently-defined prefixes.

显示（仅屏幕显示）当前定义的前缀。

ADD REPORT

Reports added Weight to any current output file (or the screen if none). Note this is the only report that shows the details of distributed weights (excluding descriptions starting with "*").

将固定重量报告向任何当前输出文件（如果没有，则为屏幕）输出。请注意，这是唯一显示分布式重量的详细报告（不包括以“*”开头的说明）。

Definition: Fixed Weight is the total weight of the vessel, exclusive of tank loads. Generally this means that the Fixed Weight is made up of the non-liquid weights which do not shift or respond to changes in the attitude of the vessel.

定义：固体重量是船舶总重，不包含舱室的装载重量。固体重量一般认为是非液体重量，不随船舶浮态变化而发生移动或变化。

参数说明

"description" or "reference"

Up to 25 characters (must be enclosed in quotation marks if more than one word; multi-word descriptions of existing items may be abbreviated at word boundaries). Item descriptions ending in "." create permanent weight items that prevent explicit DELETE or CHANGE; however DELETE ALL WEIGHTS removes them. If this parameter is absent, the weight is incorporated into the Light Ship.

最多可使用 25 个字符(如果多于一个单词则必须用引号将其引起,较多单词说明可以使用简称)。如果改变名称为以"."结尾,则将生成永久重量项目,命令 DELETE 或 CHANGE 不能将其删除,然而命令 DELETE ALL WEIGHTS 可以删除它。如果省略此参数,此重量将被加到空船重量。

w

The weight to be added, in the current weight units (see the UNITS command). If "*" is used, the magnitude of an existing weight is not altered.

将被增加的重量,以当前的重量单位为单位(参看命令 UNITS)。如果使用"*,已存在重量项目的重量数值将不会改变。

RAT

An alternative to w, this keyword selects a weight which diminishes the trim righting arm. Requires prior weight vs. displacement equilibrium.

重量 w 的一种可选形式,它将增加一个重量,用于抵消纵倾回复力臂。要求先求解浮态平衡。

DELTA

An alternative to w, this keyword selects a weight which brings about weight/displacement equilibrium at the present draft. If the center of gravity includes "?" values (or is entirely missing so defaults to "? ,? ,?"), then "?" for lcg is set such that righting arm in trim is zero, "?" for tcg is set so righting arm in heel is zero, and "?" for vcg is set to zero (see below under "Estimating a Ground Reaction").

重量 w 的一种可选形式,它将增加一个重量,使得浮态在当前吃水下平衡。如果重心位置含有"? "(或全部没有,则默认为"? ? ?"), "?"在 lcg 表示设置 lcg 使得纵倾回复力臂为 0, "?"在 tcg 表示设置 tcg 使得横倾回复力臂为 0, "?"在 vcg 位置表示设置 VCG 为 0(参考下面的“搁坐力估算”)。

lcg, tcg, vcg

Center of gravity of the weight item in the current length units, relative to the origin. Must be given in longitudinal, transverse, vertical order. If any of these are absent or "*", the current center's coordinates are used (see below under "Adding Weight at the Current Center"). MIN or MAX can be used in place of tcg to specify 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 for the lowest or highest displacer points at given lcg and tcg. PMIN and PMAX act like MIN and MAX but only consider components with positive effectiveness.

重量项目相对于原点的重心位置,单位为当前长度单位。必须按照纵向,横向和竖向的顺序给定。如果任意一个参数缺省或为"*,则默认使用当前的重心位置(参看下面的“在当前重心下增加重量”)。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 的作用相似,但它们只考虑了,起积极作用的构部件。

/FROM LIGHT SHIP

Causes the light ship to be replaced by a point weight that is reduced by the same amount as the new weight being added. /FROM is an acceptable abbreviation.

使空船重量变为点重量，并减去新增加的重量。可以简写为/FROM。

/MAX [[:FIRM] :maxw]

Establishes a maximum weight for the item (default = w) to act as a guideline for 100% loading in Load Editor. If FIRM is included, the operator is firmly prevented from exceeding this maximum. Also causes item description to be fixed in Load Editor, along with CGs unless the /FREE parameter appears. If maxw is zero, no "Load%" value is shown but CGs are fixed.

设定某重量项目的最大重量(100%装载)数值(缺省=w)。在装载编辑器中，如果包含参数 FIRM，会防止操作者所设定得值超过此最大值。如果不附加参数/FREE，其重心位置是固定不变的。如果设定 maxw 值为 0，其重心位置是固定不可改变的，但不会显示"Load%"值。

/FIX

Prevents changes to the item in the Load Editor (except for CG locations if /FREE is present).

在装载编辑器中，避免对重量项目的改变（如果出现参数/FREE，则可以改变重心位置）。

/FREE [LCG] [TCG] [VCG]

Applies when /MAX or /FIX is used, allowing CG locations for the item to be changed within the Load Editor. If /FREE is followed by LCG, TCG and/or VCG, then only the CG location(s) can be changed.

当使用参数/MAX 或 /FIX 时才适用，在装载编辑器中允许改变重量项目的重心位置。如果参数 /FREE 后附加 LCG, TCG 和/或 VCG，那么 CG 的位置可以改变。

/VRANGE: r

Establishes a range for automatic VCG changes in Load Editor, correlated linearly with weight changes ranging from vcg at /MAX:maxw (or given w if none) to vcg minus r at zero weight.

在加载编辑器中建立自动更改 VCG 的范围，与重量变化线性相关，范围从 /MAX: maxw 处的 vcg（如果没有，则给定 w）到重量减少到零时的 vcg 为止。

/[P]LEN: I1 [, I2]

Distributes the given weight over a given length. If I1 only appears, it is taken to be the length of the item and the weight density distribution is uniform. If both I1 and I2 appear, they are taken as the end locations of the item and the density distribution is linear but not necessarily uniform. If /PLEN is used, then the weight is uniformly distributed between I1 and I2 plus equal and opposite point weights at I1 and I2 (which must both appear).

在给定的长度内分布重量。如果只有 I1，则被认为是重量项目的长度。重量在此长度上是均布的。如果出现 I1 和 I2，则被认为是重量项目的端点位置。那么重量在此范围内线性分布，但并不一定为均分。如果出现参数/PLEN，重量在此范围内均布，在加上一对在 I1 和 I2 位置上的大小相等正负相反的力（它们必须同时存在）。

/PED: loc [, len]

Distributes the weight for LS purposes uniformly over given len (default=0) centered around loc. Any longitudinal moment caused by the horizontal separation of the

weight's CG and loc is applied as an idealized couple and therefore affects the bending moment but not the shear. Since the shear and bending moment curves are not congruent, a note is added to LS output. The inherent weight distribution (if any) is used for hydrostatic and inertial calculations.

将用于 LS 计算的重量均匀分布在以 loc 为中心的给定 len 的长度范围（默认值 = 0）上。由重量的 CG 和 loc 的水平偏离引起的任何纵向力矩都简化为力偶作用，因此产生弯矩，但不影响剪切力。由于剪切力矩和弯矩曲线不一致，因此在 LS 输出报告中添加了一个注释。固有重量分布（如果有）用于静水弯矩和切力计算。

/NOTE: "note"

Specifies a note to show in the Load Editor spreadsheet footer when the field cursor is in the Description column; if omitted or description editing is in progress, the default hint appears. Maximum note length depends on character sizes, but typically at least 50 characters will fit.

附加说明信息。在装载编辑器中，当光标位于重量描述列中时，此说明信息会显示在界面底部。如果省略此参数，或对重量描述进行编辑时，则会出现默认的说明信息。最大的说明信息长度取决于字符大小，一般最多为 50 个字符。

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

Specifies radii of gyration (and optional signed product of inertia gyradii) around the item's own CG, ignoring any longitudinal distribution except for individual gyradii where * is given. If turned OFF, the item has no inertia, even around total vessel CG.

指定以重量项目对于本身重心为中心的回转半径，除了给出 * 的单个回转半径之外的任何纵向分布都可以忽略。如果用 OFF，则设置为没有惯性，甚至围绕全船 CG 都没有。

/BOX: length, width, height

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

指定均匀分布在给定框形上的重量的旋转惯性，除了给出 * 的单个维度之外的任何纵向分布都可以忽略。

/LPA: area [,lca [,vca]]

Assigns lateral plane area with optional longitudinal and vertical centers (default=CG) for fixed weight contribution to heeling moment calculations. Square area distribution is assumed.

定义固定重量的受风面积及其纵向和垂向位置（如无规定，取在 CG 位置）用于横倾力矩的计算。假定按正方形分布。

/USER

Creates an item that allows subsequent ADD /USER or DELETE /USER without errors.

建立开关允许后续 ADD /USER 或 DELETE /USERm 命令，避免出现错误。

/NOWARN

Avoids the warning message when the given item replaces another.

当给定的重量项目取代其它重量项目时，不出现警告信息。

di

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

在位置 li 处的重量密度（单位长度重量）。

li

The longitudinal location at which the preceding weight density applies. The integration of the d values over l gives the item weight.

在前面重量密度设定中使用的纵向位置。通过设定纵向长度范围 l 内的重量密度给定项目的重量。

/VA: v

Specifies the vertical location for the plane of attachment for fixed weights, for use when computing longitudinal strength using the LS command. In practice, this parameter only makes a difference for high weights distributed over a non-trivial base length. Once a VA is assigned for a weight, it is not affected by ADD commands without the /VA parameter or changes to the weight in Load Editor.

指定一个高度的平面用于附加固体重量，为命令 LS 输出总纵强度所用。这个参数只会对分布于非常规长度的高重量有影响。一旦参数/VA 被指定到一个重量上，那么使用不带参数/VA 的 ADD 命令，或者在装载编辑器里改变重量，则不能将其改编。

(n)

The number of the fixed weight to access (setting empty if past the number defined).

要访问的固定重量的编号（如果前面已经定义，则设置为空）。

dv, wv, lv, tv, vv, fv, av, lpv, lcv, vcv, ...

The names of variables (declared by the VARIABLES command) used to access the fixed weight's description, weights, coordinates, forwardmost location, aftmost location, and lateral plane data. Asterisks can placeholder for any unneeded variable names.

定义变量（通过 VARIABLES 命令进行定义）代表固定重量的参数，如重量，距首端、距尾端和垂向坐标。*号可以与任何不需要的变量搭配使用。

/ACCESS

Accesses a Fixed Weight item's data into variables without making changes.

将固定重量赋予变量，没有任何改变。

(pn)

The number assigned to a prefix, in the range $1 \leq n \leq 99$ (default=1).

前缀的编号， $1 \leq n \leq 99$ （默认为 1）。

"prefix" [, "label"]

This prefix category name. If an optional label is included, it appears in the LEw right-click menu of weight categories; it may also appear in the LOAD STATUS report.

加名称分类标签，如果包含分类标签，则在装载编辑器里的可以右击 weight 选项选取；它也可以在 LOAD STATUS 输出中显示。

Operation

操作

Before the first ADD command with an item description is issued, the vessel's weight is referred to simply as "WEIGHT" or "Fixed Weight"; i.e. there is no reference made to the Light Ship in the output displays. After the first item of added weight is given, the prior weight (if any) is referred to as "LIGHT SHIP". Hence two modes are available: one where all Fixed Weights are lumped together and one where the Fixed Weight is broken down into Light Ship plus added parts or items.

在第一次用命令 ADD 增加重量项目前，船舶重量显示为重量"WEIGHT" 或 固体重量"Fixed Weight"。在输出显示中无空船重量 Light Ship 的参考条目。当使用 ADD 命令增加重量项目后，前面的重量"WEIGHT"（如果有）将变为空船重量"LIGHT SHIP"。此时有两种模式：1，所有的固体重量加权到一起。2，固体重量分为空船重量 Light Ship 和另外增加的重量子项。

In the "lumped weight" mode, the ADD command is used without the item description parameter. In this mode, the /FROM parameter would nullify the command so has no use.

在重量加权模式中，命令 ADD 后不需要添加重量项目的描述性参数。在此模式中，参数/FROM 会抵消命令作用，使命令无效。

In the itemized weight mode, the program takes care of the Light Ship item automatically. The /FROM parameter can be used to "split off" part of what is called the Light Ship. Also, the Light Ship item can be adjusted directly by issuing the ADD command without the item description parameter.

在重量子项模式中，软件会自动处理空船重量 Light Ship。参数/FROM 能够从空船重量 Light Ship 中分离出重量子项。可以通过命令 ADD 不加 description 参数来调节空船重量 Light Ship。

In either mode, adding a negative weight is equivalent to subtracting that weight.

在任何一种模式，增加负的重量就等效于减少重量。

In the itemized mode, a specific item can be removed via the DELETE command.

在重量子项模式中，通过命令 DELETE 可以删掉指定的重量项目。

If description matches an existing item, that item is replaced (also true for the Light Ship).

如果描述说明 description 参数是一个已存在的重量项目，那么此重量项目将被取代。

If the weight and center data are omitted and the /FROM parameter is included, then all of the Light Ship weight is transferred to the new item.

如果重量和重心位置信息被省略且包含参数/FROM，那么空船重量 Light Ship 将被转移到新的重量项目中。

If the weight of any item (this applies also to the Light Ship) is reduced to zero then the item does not appear in the STATUS display -- even though it remains defined as a weight item.

如果任何重量项目的重量变为 0（也适用于空船重量），那么此重量项目不会在 STATUS 显示中出现，即使它仍在定义中里。

The RAT parameter selects a weight such that the Righting Arm in Trim is brought near zero. However, the act of changing the weight destroys the weight/displacement equilibrium, necessitating that the draft or weight be adjusted (by issuing a SOLVE command, for example) before the resulting trim righting arm can be evaluated. Three or four iterations of these commands are usually required before the trim righting arm vanishes.

参数 RAT 会添加一个重量使得纵倾回复力臂几乎为 0。然而，改变重量会破坏原有的重量和排水量平衡，在计算纵倾回复力臂前，需要重新调整吃水或重量（通过命令 SOLVE）。一般需要 3 到 4 次的重复才可以使纵倾回复力臂消失。

The vessel must be in weight/displacement equilibrium before an ADD RAT command is issued.

在使用命令 ADD RAT 前，船舶必须处于重量和排水量平衡状态。

Wind trimming moment, if present, is not considered by ADD RAT.

如果出现纵向倾斜力矩，命令 ADD RAT 并不考虑此力矩的影响。

In a similar manner, the DELTA parameter sets the added weight such that the difference between weight and displacement becomes zero. But contrary to the RAT operation, this achieves weight/displacement equilibrium. Therefore, ADD RAT and ADD DELTA can be alternated (using items with different longitudinal locations) in order to achieve a given trim at a given draft.

类似的方法，参数 DELTA 设定增加的重量，使船舶重量和排水量相等。和 RAT 相反，DELTA 使船舶重量和排水量平衡。因此 ADD RAT 和 ADD DELTA 可以交替使用（使用纵向位置不同的重量项目）以达到在指定吃水下的指定纵倾。

When WEIGHT and SOLVE commands are used to adjust the total fixed weight in the presence of added items, only the Light Ship weight is changed in order to arrive at the total weight required.

当使用命令 WEIGHT 和 SOLVE 调整总的固体重量时，只有空船重量项目被调整，以达到所需要的船舶总重量。

Using the Prefix

使用前缀：

The prefix feature is useful for categorizing weight items. The prefix is one or more characters at the beginning of each weight item description. This does not increase the maximum length of the item description which is still limited to 25 characters. A number pn can be assigned to each unique prefix so that more than one prefix can

be defined and the number used for easy reference. One prefix is designated the "current" one, either because it is the one most recently defined or because it has been made current by the ADD PREFIX (pn) CURRENT command. The current prefix has these effects: 1) it is automatically inserted in subsequent ADD commands defining new fixed weights; 2) subsequent LOAD STATUS WEIGHT commands show only those weight items matching the current prefix; 3) the load editor (LEw) weight display shows those weight items matching the current prefix .

前缀功能可以将重量项目分类。前缀为重量项目名称说明的开头一个或多个字母，这并没有增加项目名称说明的最多字符限制，仍然最多为 25 个字符。可以对前缀进行编号，这样可以定义多个前缀，同时用编号可来方便地调用前缀。其中一个前缀为当前前缀，它是最新定义的前缀或是被设置为当前的前缀，命令 ADD PREFIX (n) CURREN。当前前缀有以下作用：1，自动为后续 ADD 命令所定义的新的固体重量项目加前缀。2，后续的 LOAD STATUS WEIGHT 命令中只会显示和当前前缀匹配的重量项目。3，装载编辑器中重量只会显示和当前前缀匹配的重量项目。

Adding Weight at the Current Center

在当前重心位置增加重量

A special technique is available for the case where the weight is to be added at the current location of the center of gravity: an asterisk can be used for any of the lcg, tcg or vcg coordinates. The program substitutes the current center of gravity coordinate for the asterisk. If the /FROM parameter is present, the center of the LIGHT SHIP weight is used; if the item is being replaced, its previous center is used; otherwise the total Fixed Weight center of gravity is used. Further, if a number is appended (without any intervening spaces) to any of these asterisks, the value of the current center, modified by that amount, is used. (This *±n syntax is also available for CRTPT, REFPT, PROP and WEIGHT command coordinates).

有一种特殊的方法，可以在当前重心位置增加重量：星号*可以代替任何 lcg, tcg 或 vcg。软件用星号*代替当前的重心位置。如果出现参数/FROM，则使用空船重量 LIGHT SHIP 的重心位置；如果重量项目被替代，则使用之前设定的重心位置。否则，会使用整个固体重量的重心位置。另外，如果一个数值附加在星号*后面（中间没有空格），那么星号代表的当前的重心位置将被改动相应的数值量。（*±n 语法同样适用于 CRTPT, REFPT, PROP 和 WEIGHT 命令坐标）

For example,

例如：

ADD "CARGO ON DECK" 650, *+0.5A * 17.25

adds a weight of 650 at a location 0.5 aft of the Fixed Weight center of gravity, at the Fixed Weight transverse center and 17.25 above baseline.

增加重量 650，纵向重心位置在固体重量当前纵向重心向后加 0.5，横向重心为固体重量当前横向重心，垂向重心为基线以上 17.25。

In a similar manner, the w parameter can be replaced by an asterisk expression, but only when the item is being replaced.

相似的方式，如果对已存在的某重量项目重新赋值，此重量项目的参数 w 也可以用星号*代替。

The absence of the `tcg` and `vcg` parameters is equivalent to asterisks being used.

省略参数 `tcg` 和 `vcg`，等同于在相应位置使用星号*。

Combining Weight Items

组合重量项目

A special form of the ADD command can be used to combine other weight items into a single point weight. The magnitude and location of the new weight item is equal to the sum of all the items it replaces. The new item is a point weight, even if some of the replaced items were distributed (not point) weights. For example,

命令 ADD 可以将其它的重量项目组合为一个点重量。新重量项目的重量和重心等效于其所替代的重量项目之和。新组合成的重量项目是点重量，即使被替代的重量项目为分布式重量（非点重量）。例如，

```
ADD "Inclining weight #1" 7.5 95.0 3.0p 25.0
ADD "Engine room spares " 0.9 120.0 0.0 4.0
ADD "Galley stores      " 2.5 32.0 0.5s 31.0
ADD "* Weights to deduct" ""
```

combines weights entered from a deadweight survey into one item called "* Weights to deduct".

将从空船测量中得到的重量项目组合为一个重量项目，名称为"* Weights to deduct".

The item reference in the above example is "*". In general, the item reference may be a string of characters ending with an asterisk. Only those items whose leading characters match the item reference are included in the combination.

上例中的参考重量项目为"*"。参考重量项目一般为一串字符后加星号*，则只有那些和参考重量名称开头字母相匹配的重量项目才可以被合并。

Light Ship and any items beginning with an asterisk are always omitted from the combination.

空船重量和任何以*号开头的重量项目在合并中总会被忽略。

Items to be Associated with Light Ship

和空船重量 Light Ship 相关的重量项目：

Weight items whose descriptions begin with "+" or "+*" are considered to be closely associated with the Light Ship when reported by the STATUS command.

当用命令 STATUS 输出报告时，名称以"+"或"+*"开头的重量项目是被认为与空船重量 Light Ship 密切相关的重量项目。

Distributed Weights

分布重量：

Distributed weights may be specified with the ADD command using the same syntax as is used with the WEIGHT command. If a weight distribution is given, it implies a longitudinal center also; and it may be followed by values of tcg and vcg.

可以通过命令 ADD 定义分布式重量，句法规则和命令 WEIGHT 相似。如果定义了重量分布，同时也暗含了纵向坐标位置，也可以后面加上 tcg 和 vcg。

As with the WEIGHT command, several weights may be combined to form the item by separating them with semicolons. For example,

像 WEIGHT 命令一样，也可以将用分号分开的重量项目组合成一个重量项目。例如：

```
ADD "Deck Cargo" 12.5 @ 150f, 12.5 @ 100f, 0, 26.25;  
          9.0 @ 90a, 11.0 @ 120a, 0, 25.50
```

combines two weights in the "Deck Cargo" item.

将两分布重量项目组合为重量项目"Deck Cargo"。

Distributed weights can be initialized to zero while keeping an internal distribution structure. If all points are zero in a distributed list, then each point shares equally when given weight in Load Editor. Alternatively, ADD can set up a nonequal distribution using nonzero points weights, but assign the total weight of the entire distribution to 0 by preceding the list with a "0;" prefix.

分布重量可以被初始化为重量是 0，并保持其内部点重量密度分布结构不变。如果分布里面所有的点重量密度都为 0，那么在装载编辑器中输入重量后，重量将均匀分布到每个点上。同理，ADD 命令可以通过点重量密度为 0 的方式设置一个非均匀的分布，并在列前加一个“0;”前缀使得这个重量项目的总重为 0。

Another method of specifying a simple weight distribution is by means of the /LEN parameter. In this case, the longitudinal end points of the item are determined by the l2 and/or l1 numbers.

定义分布重量的另一种方法为使用参数/LEN，这种方法中，重量项目纵向位置的端点由参数 l2 或 l1 数值决定。

Asterisks are not allowed with distributed weights except for incremental adjustments to its overall weight or CG using *±increment for one or more values. See the Longitudinal Strength User's Manual for a further discussion of distributed weights.

除了用于对其总重量或 CG 进行增量调整，对一个或多个值使用 *±增量外，星号*不允许应用在分布重量中。详细介绍参看总纵强度用户手册。

Estimating a Ground Reaction as a "Negative Weight"

将搁坐力估算为“负的重量项目”

The special form

特殊形式：

```
ADD "description" DELTA [? , ? , vcg]
```

finds the weight and center that results in equilibrium using the specified vcg (or at the baseplane by default). This is useful for determining the effective point at which the forces of a ground reaction occur. If the buoyancy force is less than the total weight (in the absence of the ground reaction) then the ADDED weight will be negative.

利用设定的 vcg（或默认在基平面上）求得可以使船舶达到平衡的重量和重心位置。这个方法可以有效确定船舶搁浅时搁坐力的作用点。如果浮力小于船舶总重（在没有搁坐力作用情况下），那么增加的重量会是负的。

For example,

例如：

ADD "GROUND REACTION" DELTA

adds a new baseplane weight item (or revises an existing one having the same description) such that weight equals buoyancy and righting arms in trim and heel are zero. If the resulting lcg and tcg of GROUND REACTION are not at a realistic location, this indicates that the assumed waterplane is not realistic (i.e. the vessel would in reality assume a different attitude).

增加一基平面上的重量项目（或修正已存在的名称描述相同的重量项目），使得船舶浮态平衡且使纵倾横倾复原力臂为 0。如果计算出的搁坐力的 LCG 和 TCG 不在合理位置，说明假定的水平面并不合理（例如：船舶真实的状态可能是另一个姿态）。

Ground Reaction as Positive Buoyancy

搁坐力为正的浮力

This topic is discussed under the GROUND command. For compatibility with older Run Files, the ADD /GR command can also be used to define ground points. The syntax is similar to that used by the GROUND command.

这是在命令 GROUND 下讨论的问题。考虑旧的运行文件的兼容性，命令 ADD /GR 可以用来定义搁坐点，语法规则和命令 GROUND 的相似。

Display Output

显示输出

In the REPORT mode, a table is produced with columns for item name, weigh, type (point or center), LCG, length, TCG and VCG.

在 REPORT 模式下，输出表中包含，名称，重量，类型（点或中心），LCG，分布长度，TCG 和 VCG。

Nondisply Output

无显示输出

none.

无

Examples

样例

Adding a weight to the Light Ship or total Fixed Weight:

增加一重量项目到空船重量或总的固体重量:

ADD 123, 12.2, 0, 10.12

Adding an itemized weight to the total Fixed Weight:

增加一重量项目到总固体重量:

ADD "Fish in hold" 165.4 42 7.7 9.75

"Splitting off" a weight from the light ship:

从空船重量中分离出某重量项目:

ADD "Aux. Generator Removed" .755, 3.4, 12.5, 15.6 /FROM LIGHT SHIP

Adding a distributed weight:

增加一分布重量:

ADD ICE .27 @ 230f, .35 @ 200f, .35 @ 230a

Distributing an existing weight over a given length:

在给定长度内分布一重量项目:

ADD "Fish in hold" * /LEN:6

Adding weight to achieve a given draft:

增加重量以达到给定的吃水:

DRAFT = 12.5 @ 0

ADD"Growth" DELTA * * *

Adding weight to achieve a given trim:

增加某重量以达到给定的纵倾:

TRIM=0.25/123

FIX TRIM

MAC LRAT`Defining a macro for convenience.`定义宏命令

SOLVE

ADD "Trimming weight" RAT 105,0,4

/

.LRAT(3) `Does the SOLVE & ADD 3 times.` 3 次求解并增加重量

VARY TRIM

SOLVE

Cycling through increasingly higher deck loads, assuming a macro 'STABIL' which does whatever analysis you require:

循环增加甲板货物的高度，假定宏命令 STABIL 可以求解你需要的计算：

ADD "DECK CARGO" 1200, 4.5, 0, 27

MAC CYCLE

.STABIL

ADD "DECK CARGO" * * * *+1 `Same load with VCG increased 1.

/

.CYCLE(5) `Runs DECK CARGO VCG's from 27 to 31.

Transferring the Light Ship weight to a new item (effectively renaming it):

把空船重量转移到某新的重量项目（等效于重命名）：

ADD "Ship as inclined" /FROM

Combining all the containers in HOLD #1 into a single fixed weight item.:

将所有舱室 HOLD #1 内集装箱的重量集合到某单一固体重量：

Add "Container 1" 10, 100, -12, 44

Add "Container 2" 15, 100, -4, 44

...

ADD "*" HOLD #1 " " "Container *"

Finding a "negative weight" ground reaction:

求解一个负的重量作为搁坐力：

HEEL = 2.34s

DRAFT = 12.5 @ AP, 4.33 @ FP

ADD "GROUND REACTION" DELTA

Setting the center of gravity of the Light Ship without altering the weight magnitude:

设定空船重心而不改变其重量：

ADD "LIGHT SHIP" *, 1, 0, 10

Using a weight prefix:

使用重量前缀：

ADD PREFIX "Anchor-", "Anchor system"

ADD "1", 15, 200f, 12s, 35

ADD "1 chain", 25, 105f, 12s, 15

ADD "2", 15, 200f, 12p, 35

ADD "2 chain", 25, 105f, 12p, 15