

## 命令模式

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GROUP name = tank list /CONT:"contents"

Establishes a group of two or more tanks to be represented by a single name.

创建代表两个或多个舱室的组。

GROUP name = tank1 -> tank2 [->, ... -> tankn]

Provides for the spilling of contents from one tank to another.

规定一个舱室到另一个舱室泄漏（传输）舱容物质。

GROUP name = tank1 <- tank2 [(f2)][, ... ,tankn[(fn)]]

Provides for the receiving of contents (spilling of void) from one or more tanks to another.

规定从一个或多个舱室到另一个舱室接收（传输）舱容物质。

GROUP [name | -] [/NOREF] [/NOMINAL] [/FSM | /TRUEFSM | /MAXFSM]

[/NONOTE] [/DESCRiption] [/PERM] [/VOLume[:unit]]

Displays a report for the given tank groups.

输出所指定的舱室组的报告。

GROUP [name] OFF

Deletes the given groups (but not the tanks represented).

删掉指定的组（但并不删掉这个组所代表的舱室）。

## 参数说明

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name

The name of the tank group (up to 12 characters with no spaces allowed).

舱室组的名称（最多允许 12 个字符）。

tank list

The name of one or more tanks which are to be included in the group. Tank names in tanklist may end in an asterisk to represent all tanks whose names have the same beginning.

组中所包含的一个或多个舱室的名称。舱室名称可以用\*结尾，来代表所有以相同字母开头的舱室。

/CONT:"contents"

Limits the tanks to those having the indicated contents name.

限定舱室，舱室中需包含指定的舱容物质。

tanki

Specifies a tank name to be used in the group.

指定将使用的组中的舱室名称。

fi

Specifies the fraction which is to be transferred from tanki. This is the fraction of the amount required to fill the receiving tank after tanki-1 has made its contribution.

指定从舱室 tanki 中传输的液体量的百分比。这将是液体从舱室 tanki-1 输出后，被传送到其他指定舱室的液体总量。

#### /NOREF

Turns off the Reference Point height column.

关闭参考点高度列。

#### /NOMINAL

Forces the display of nominal tank weights (nominal load fraction x maximum weight), which may differ slightly (due to iteration tolerances) from the actual weights computed under the current tank conditions. Also makes loads appear as percentages.

强制显示舱室的名义装载重量（装载系数 x 最大装载重量），这可能会和当前舱室计算的实际装载重量有细小差别（累积计算误差）。同时使舱室装载以百分比形式显示。

#### /FSM | /TRUEFSM | /MAXFSM

Causes nominal, true, or maximum FSM values to be shown rather than reference heights.

显示正式的，实际的，或最大的自由液面矩而不是参考点高度。

#### /NONOTE

Omits the final report note stating that asterisks mark formal FSM value.

省略输出报告中的关于用星号\*来标记形式的自由液面矩的注释。

#### /DESCRIPTION

Causes tank descriptions to be shown instead of names.

显示舱室的描述说明而不是舱室名称。

#### /PERM

Causes tank permeability values to be shown.

显示舱室的渗透率。

#### /VOLUME [:volumeunit]

Causes tank volumes to be shown. May specify the units of volume; see the TC command for a list of the 2-letter volume unit codes.

显示舱室的容积。可以指定体积单位；参照 TC 命令，体积单位用 2 个字母表示。

## Operation

### 操作

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The GROUP command allows two or more tanks to be represented by a single name. The restrictions are: 1) if the spills or receive contents from one tank to another, then they all must have the same contents; 2) a tank may belong to one and only one

group; 3) all tanks in the group must be intact and 4) group names must differ from other part names.

命令 GROUP 可以使得两个或多个舱室由一个名称表示。限制条件为：1) 如果组内的一个舱室向另一个舱室溢出物质，那么，这些所有舱室必须含有相同的舱容物质；2) 一个舱室能且仅能归属于一个组；3) 在组中的舱室必须是完整的；4) 组的名称必须和其它的子模型名称不同。

All forms of the GROUP command allow multiple tanks to be grouped together. The STATUS command recognizes groups and replaces the individual tanks in the group with a single line which gives the total load, weight and center of gravity for all of the tanks in the group.

命令 GROUP 的所有形式都允许把多个舱室归为成组。命令 STATUS 能识别各个组名，并用一行显示组内所有舱室总的装载、重量及重心以代替显示各个舱室的装载。

The mode with the -> connective allows for the transfer (i.e. spilling) of the contents of one tank into another, which in turn can spill its contents into a third tank. Each "spilling" tank will spill its contents if the level in the tank is above its reference point and until the level in the receiving tank has reached its reference point or until the receiving tank is 100% full. Do not confuse this with the tank type SPILLING. All tanks in the group must be INTACT tanks.

连接形式->能将一个舱室中的舱容转移（或泄漏）到另一个舱室，同理能转移到第三个舱室。只要舱室内的液面高于该舱室的参考点，每个泄漏的舱室都会泄漏其舱容到其他的关联舱室，直到该泄漏舱室或关联舱室的液面达到其参考点或者所关联的舱室满舱为止。不要把这个与舱室形式与命令 SPILLING 混淆。组内中的所有舱室必须为完整舱室。

The mode with the <- connective allows the transfer of the contents from one or more tanks into a single "receiving" tank. Each "spilling" tank loses its contents until the level in the tank is below its reference point or until it has provided the specified fraction (fi). For example,

连接形式<-能将一个或多个舱室内的舱容转移到一个关联的“接受”舱室中。“贡献”舱室的舱容贡献量为：1) 舱室液面低于参考点；或者2) 贡献量达到指定百分数。例如：

**GROUP HOLD1 = UPPER1.P <- HOLD1.C (.5), UPPER1.P(.5), LOWER1.P**

would transfer 50% from HOLD1.C and 25% from both UPPER1.P and LOWER1.P.

将会从 HOLD1.C 转移 50%，UPPER1.P 和 LOWER1.P 各转移 25%。

The GROUP name mode prints a report for the specified group. If no group is specified, a report for all groups is displayed. If GROUP - is used, then only miscellaneous tanks not included in any group are reported.

GROUP name 命令样式将会输出指定组的报告。如果没有指定组名，将显示所有组的报告。如果使用 GROUP-，则仅报告未包含在任何组中的其它舱室。

The GROUP OFF command deletes the specified group. If no group is specified, all groups are turned off.

命令 GROUP OFF 用于删除指定组。如果不指定组名，将删除所有的组。

## Output:

### 显示输出:

The GROUP command displays the load fraction, weight and center of gravity for each tank in the group plus the group totals (the same totals which are reported in the STATUS TANKS command). The display also designates "spilling" and "receiving" tanks.

命令 GROUP 显示组内各个舱室的装载百分数、重量和重心以及对应的总计（使用命令 STATUS TANKS 能同样得到所有舱室的总计信息）。“泄漏”和“接受”舱室也会被分别注明。

The /NOMINAL parameter makes a slight change in the weights as indicated above. This makes the GROUP report agree exactly with the LOAD EDIT and LOAD STATUS reports which show nominal tank volumes and weights (load fraction x maximum volume or weight). Another indication that nominal weights are being shown is in the total line where the word GROUP is shown in capital letters.

根据之前所述，参数/NOMINAL 会使装载重量有细微的变化。这使得 GROUP 报告和同样使用名义舱容及重量（装载百分数 x 最大舱容或重量）输出的 LOAD EDIT 和 LOAD STATUS 报告完全一致。需要指出的是，名义重量会显示在总计当中，其中 GROUP 字母会大写显示。

## Examples

### 样例

Putting fuel tanks into a single group.

把燃油舱放入一个组中：

```
GROUP FUEL = FOWING*, FODB*, FODAY*
```

Putting all tanks whose names begin with "DB" and which contain Fuel Oil into a group.

把所有以"DB"开头且舱容物质为燃油的舱室放入一个组中：

```
GROUP FUEL = DB* /CONT: "FUEL OIL"
```

Displaying a report for the group FUEL.

显示 FUEL 组的报告：

```
GROUP FUEL
```

Modeling the spilling of contents from WING1.P into CENTER1.C and from CENTER1.C into WING1.S.

模拟舱容物质从舱室 WING1.P 泄漏到舱室 CENTER1.C，再泄漏到舱室 WING1.S：

```
REFPT (WING1.P) 100 -10 15
```

```
REFPT (CENTER1.C) 100 10 15
```

```
REFPT (WING1.S) 100 10 35
```

```
GROUP HOLD1 = WING1.P -> CENTER1.C -> WING1.S
```

Modeling the shifting of grain within a cargo hold into WING1.P; 75% from CENTER1.C and 25% from WING1.S.

模拟谷物在货仓内的移动到舱室 WING1.P, 其中 75% 来自舱室 CENTER1.C, 25% 来自舱室 WING1.S:

REFPT (WING1.P) 100 -20 35

REFPT (CENTER1.C) 100 -10 15

REFPT (WING1.S) 100 10 15

LOAD (WING1.\*) /GRVOID: 1

LOAD (CENTER1.C) /GRVOID: 0.5

GROUP HOLD1 = WING1.P <- CENTER1.C (.75), WING1.S

HEEL 15

Turning off the group FUEL.

关闭组 FUEL:

GROUP FUEL OFF