

如何在 OPIM 中创建各种 BOM 报告类型

ISO 图中的 BOM 报告信息可能会因项目的不同要求而异，例如 FABRICATION、ERECTION、和 CONTINUOUS 类型。在 OpenPlant Isometrics Manager 中，通过修改每个工作集对应的样式文件夹下的 report.def 文件，可以创建各种类型的报告并将其存储在样式文件夹下，这样用户可以定义多个样式文件夹以配置多种 BOM 报告类型。在这篇文章中，我们将以默认的 report.def 文件为例，讲述各种 BOM 报告类型的设置，以及如何设置 style.cfg 和 rep_sortgroups.txt 文件，以控制 BOM 报告的排序。

操作步骤

1. 案例一：对于任何 FABRICATION 报告，在 report.def 文件中使用过滤器：

INCLUDE = IE_FIELD=0

EXCLUDE = IE_TYPE=CT_WELD

```
-----
# A sample report that writes shop material to a report
#-----
REPORT = SHP

# this to include only shop material
INCLUDE = IE_FIELD=0
EXCLUDE = IE_TYPE=CT_WELD

COLUMN = 3: R : PARTID
COLUMN = 19: R : QUANTITY
COLUMN = 7: R : SIZE1
COLUMN = 7: R : SIZE2
COLUMN = 7: R : SIZE
COLUMN = 15: R : PIECE_MARK
COLUMN = 2: :
COLUMN = 60: W : IE_DESCRIPT

GROUP = PARTID
SORT = PARTID:N
SEP = @
SORTHEADERS = 1

TEXT = @ -----
TEXT = @ Shop Materials
TEXT = @ -----
Write =
END
```

注意：通过添加井号 (#) 作为前缀禁用其他已定义报告，例如 FLD，并将节点号 NODE 保留在 Combi 报告下。见下图：

```
-----
# A sample report that writes field material to a report
# Definition is the same as for the SHP report except for the INCLUDE line
#-----
#REPORT = FLD

#-----
# The COMBI report combine the SHP and FLD report into a single report
# and attaches it to textnode 60 in the isometric
#-----
REPORT = combi
WRITE = shp
TEXT = @
TEXT = @
WRITE = fld
NODE = 60
END
```

保存并关闭报告文件并生成等轴测图以验证结果：

Bill of Materials					
Pos	Quantity	Size1	Size2	Piece Mark	Description
Shop Materials					

PIPES					

1	1630	100	100	PIP100mm	PIPE, SCH 40

FITTINGS					

2	2	100	100	FLGWNK100mm	WELD NECK FLANGE, 150LB, RF
3	1	100	100	90LLR100mm	90 DEG LR ELBOW, SCH 40, BW

2. 案例二：对于任何 ERECTION 报告，在 report.def 文件中使用过滤器

INCLUDE = IE_FIELD=1

EXCLUDE = IE_TYPE=CT_WELD

```
#-----
# A sample report that writes field material to a report
# Defintion is the same as for the SHP report except for the INCLUDE line
#-----
REPORT = FLD

# this to include only field items
INCLUDE = IE_FIELD=1
EXCLUDE = IE_TYPE=CT_WELD

COLUMN = 3: R : PARTID
COLUMN = 19: R : QUANTITY
COLUMN = 7: R : SIZE1
COLUMN = 7: R : SIZE2
COLUMN = 15: R : PIECE_MARK
COLUMN = 2: :
COLUMN = 60: W : IE_DESCRIPT

GROUP = PARTID
SORT = PARTID:N
SEP = @
SORTHEADERS = 1

TEXT = @ -----
TEXT = @ Field Materials
TEXT = @ -----
Write =
END
```

同理，通过添加井号 (#) 作为前缀禁用其他已定义报告，例如 SHP 报告，并将节点号 NODE 保留在 Combi 报告下。见下图：

```
#-----
# A sample report that writes shop material to a report
#-----
#REPORT = SHP

#-----
# The COMBI report combine the SHP and FLD report into a single report
# and attaches it to textnode 60 in the isometric
#-----
REPORT = combi
WRITE = shp
TEXT = @
TEXT = @
WRITE = fld
NODE = 60
END
```

保存并关闭报告文件并生成等轴测图以验证结果：

Bill of Materials					
Pos	Quantity	Size1	Size2	Piece Mark	Description

Field Materials					

PIPES					

4	354	150		PIP150mm	PIPE, SCH 40

FITTINGS					

5	1	150	100	REDCON150mmX100	CONCENTRIC REDUCER, SCH 40, BW

VALVES					

6	1	100		VALVGAT100mm	CONDUIT GATE VALVE, 150LB, RF

Gaskets					

7	2	100		GAS100mm	GASKET, 150LB

Bolts					

8	16	16	90	BOLT100mm	ASTM A307, 15 875 X 90 STUD BOLT

3. 案例三：对于 CONTINUOUS 报告，在 report.def 文件中使用过滤器：

EXCLUDE = IE_TYPE=CT_WELD

```
#-----
# A sample report that writes shop material to a report
#-----
REPORT = SHP

# this to include only shop material
#INCLUDE = IE_FIELD=0
EXCLUDE = IE_TYPE=CT_WELD

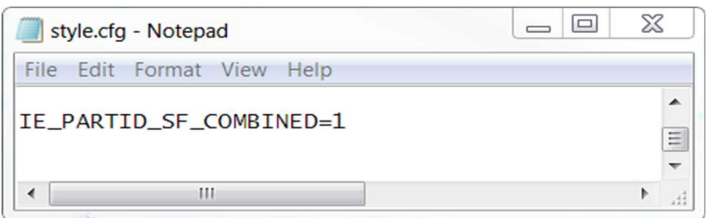
COLUMN = 3: R : PARTID
COLUMN = 19: R : QUANTITY
COLUMN = 7: R : SIZE1
COLUMN = 7: R : SIZE2
COLUMN = 2: :
COLUMN = 60: W : IE_DESCRIPT

GROUP = PARTID
SORT = PARTID:N
SEP = @
SORTHEADERS = 1

TEXT = @ -----
TEXT = @ CONSOLIDATED BOM
TEXT = @ -----
Write =

END
```

为了得到一个连续的编号顺序，应该在 style.cfg 中设置
IE_PARTID_SF_COMBINED=1。见下图：



保存并关闭报告文件并生成等轴测图以验证结果：

Bill of Materials				
Pos	Quantity	Size1	Size2	Description

CONSOLIDATED BOM				

PIPES				

1	354	150		PIPE, SCH 40
2	1830	100		PIPE, SCH 40

FITTINGS				

3	1	150	100	CONCENTRIC REDUCER, SCH 40, BW
4	2	100		WELD NECK FLANGE, 150LB, RF
5	1	100		90 DEG LR ELBOW, SCH 40, BW

VALVES				

6	1	100		CONDUIT GATE VALVE, 150LB, RF

Gaskets				

7	2	100		GASKET, 150LB

Bolts				

8	8	16	90	ASTM A307, 15 875 X 90 STUD BOLT
9	8	16	90	ASTM A307, 15 875 X 90 STUD BOLT

4. 案例四：创建只有管道和管件排序标题的报告。在 report.def 文件的 SHP 报告中增加以下变量，并通过添加井号 (#) 作为前缀禁用标题文本其他已定义报告：

INCLUDE = IE_FIELD=1

```

97 # A sample report that writes shop material to a report
98 #-----
99 REPORT = SHP
100
101 # this to include only shop material
102 INCLUDE = IE_FIELD=0
103 INCLUDE = IE_FIELD=1
104 EXCLUDE = IE_TYPE=CT_WELD
105
106 COLUMN = 3: R : PARTID
107 COLUMN = 19: R : QUANTITY
108 COLUMN = 7: R : SIZE1
109 COLUMN = 7: R : SIZE2
110 COLUMN = 2: :
111 COLUMN = 60: W : IE_DESCRPT
112
113 GROUP = PARTID
114 SORT = PARTID:N
115 SEP = #
116 SORTEADERS = 1
117
118 # TEXT = # -----
119 # TEXT = # Shop Materials
120 # TEXT = # -----
121 Write =
122 END
123
124 #-----
125 # A sample report that writes field material to a report
126 # Definition is the same as for the SHP report except for the INCLUDE line
127 #-----
128 #REPORT = FLD
129
130 # this to include only field items
131 INCLUDE = IE_FIELD=1
132 EXCLUDE = IE_TYPE=CT_WELD
133
134 COLUMN = 3: R : PARTID
135 COLUMN = 19: R : QUANTITY
136 COLUMN = 7: R : SIZE1
137 COLUMN = 7: R : SIZE2
138 COLUMN = 2: :
139 COLUMN = 60: W : IE_DESCRPT
140

```

然后打开 rep_sortgroups.txt 文件，只保留 PIPES 和 FITTINGS 标题组，将其他标题组下所有组件都集中到 FITTINGS 中，如下图所示。

```
36 # earlier the match the lower the part ID will be
37 #
38 -----
39 SORTGROUP = PIPES
40 HEADER = @ -----
41 HEADER = @ PIPES
42 HEADER = @ -----
43 RULE = IE_TYPE=CT_PIPE|CT_BEND
44
45 # The fitting group is defined here because we want it reported after the
46 # PIPES group in the report. No Rules are yet defined because so many different
47 # component types belong to this group
48 #
49 SORTGROUP = FITTINGS
50 HEADER = @ -----
51 HEADER = @ FITTINGS
52 HEADER = @ -----
53
54 Remove all Sort Group and copy all Rule Syntax
55 under Fitting
56
57 # Here we re-visit the FITTINGS group
58 # The initial entry defined the order (after the PIPES group)
59 # We add everything not yet caught here to belong to the fittings group
60 SORTGROUP = FITTINGS
61
62 RULE = IE_TYPE = CT_PIPESPOOL
63 RULE = IE_TYPE = .*VALVE.*
64 RULE = IE_TYPE=CT_GASKET
65 RULE = IE_TYPE=CT_CLAMP
66 RULE = IE_TYPE=CT_SUPPORT
67 RULE = IE_TYPE=CT_BOLT
68 RULE = IE_TYPE = CT_REDUCER
69 RULE = IE_TYPE = CT_ECCENTRIC_REDUCER
70 RULE = IE_TYPE = .*FITTING.*
71 RULE = IE_TYPE = CT_FLANGE
72 RULE = IE_TYPE = CT_LAPJOINT
73 RULE = IE_TYPE = CT_STUB
74 RULE = IE_TYPE = CT_FERRULE
75 RULE = IE_TYPE = CT_ELBOW
76 RULE = IE_TYPE = CT_OLET
77 RULE = IE_TYPE = CT_STRAINER.*
78 RULE = IE_TYPE = CT_INSTRUMENT.*
79 RULE = IE_TYPE = CT_RETURN.*
```

保存在 Style 文件夹中进行更改后的文件，验证结果。见下图：

Bill of Materials				
Peg	Quantity	Size1	Size2	Description
PIPES				
1	6716	900		PIPE, S&W 914.0 O/D x 15.9 W/T L&SME TO T/SP/DAT/6 & T/SP/PI/P/1 COATED
2	4864	900		PIPE, S&W 914.0 O/D x 12.7 W/T L&SME TO T/SP/DAT/6 & T/SP/PI/P/1 FREE ISSUE FOR PIPE PUPS
FITTINGS				
3	1	900	901	TEE, EXTD EQUAL TO SUIT 15.9 W/T L&S PIPE C/N 259 LONG PUPS T/SP/B/12 BELON
4	1	900		910 n&g01N12 A-8-n&g40N2
5	1	900		FLANGE, WELD NECK, RJJ C S T/SP/P/1 TO SUIT PIPE 15.9MM W/T 914.0MM O/D L&S CL610
6	1	900		VALVE, BALL, FULL BORE, FLCD CL600 RTJ BARE STEM T/SP/V&S
7	2	900		JOINT, RING, CLASS 610, 900 NOM DIA TO T/SP/E/SS TYPE R91 (OCTAGONAL)
8	36	2	11	STD BOLT 1/2" 3/4"
9	1	900		FLANGE, WELD NECK, RJJ C S T/SP/P/1 TO SUIT PIPE 15.9MM W/T 914.0MM O/D L&S CL610