

PDMS HVAC全参数化元件建库方法

-----以矩形三波补偿器的建立为例:

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1 在PARAGON中建立三波补偿器元件SCOM---BCQ

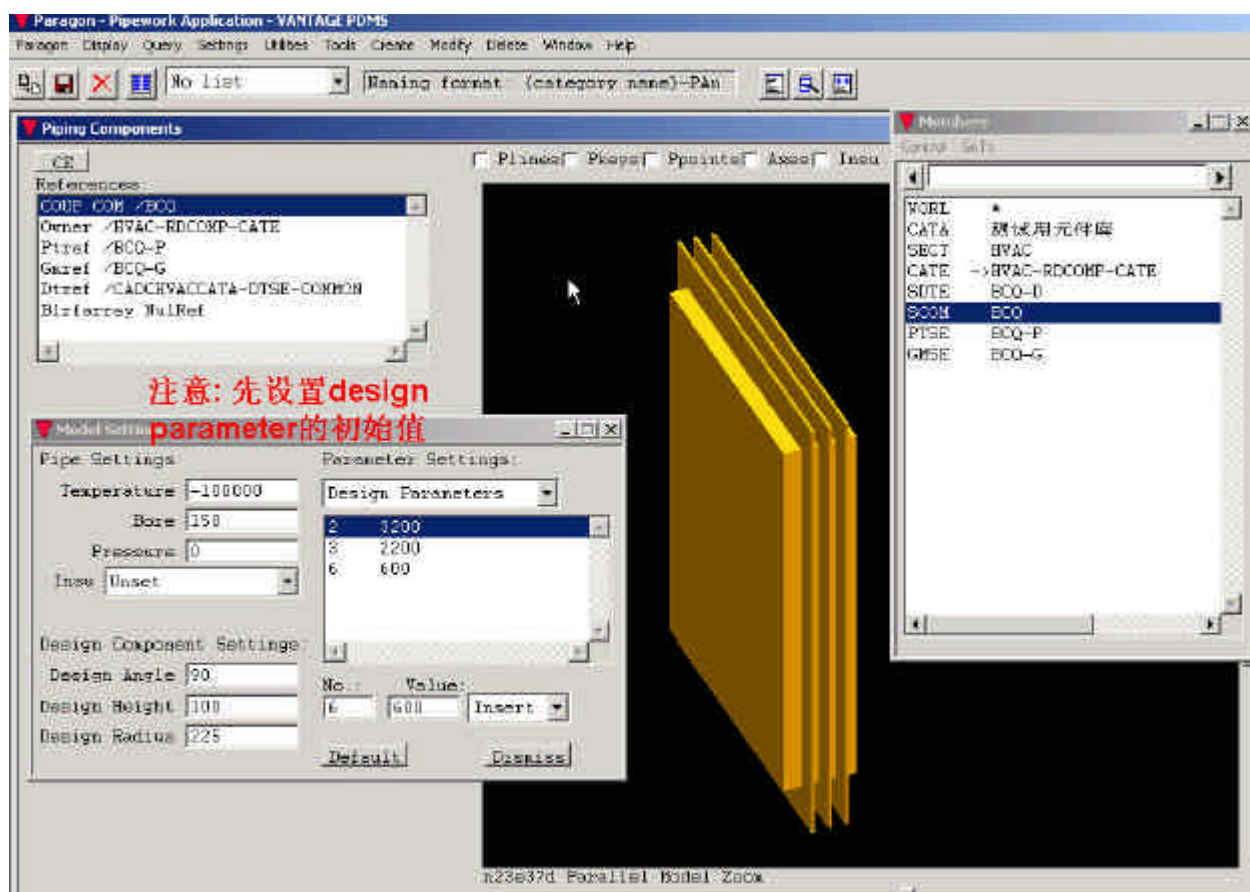
1.1 所有DESP设计参数优先采用系统预置的78个参数(如下),若不够,可添加,并增加DATASET 值:

参数顺序号	参数标识 DKEY	参数描述 DTITLE
DESP[0]	PLOT	Plotfile 元件示意图
DESP[1]	DESC	Description 元件描述
DESP[2]	AARR	A of Arrive 入口 A 值
DESP[3]	BARR	B of Arrive 入口 B 值
DESP[4]	ALEA	A of Leave 出口 A 值
DESP[5]	BLEA	B of Leave 出口 B 值
DESP[6]	LENG	Length 元件长度
DESP[7]	BRLE	Branch Length
DESP[8]	ANGL	Angle
DESP[9]	RADI	Radius
DESP[10]	AOFF	A offset
DESP[11]	BOFF	B offset
DESP[12]	ATHR	Arrive Throat
DESP[13]	LTHR	Leave Throat
DESP[14]	SEGS	No of Segments
DESP[15]	AEXT	Arrive extension
DESP[16]	ANOT	Arrive notch
DESP[17]	LEXT	Leave extension
DESP[18]	LNOT	Leave notch
DESP[19]	BEXT	Branch extension
DESP[20]	BNOT	Branch notch
DESP[21]	AJA	A of Arrive joint
DESP[22]	AJB	B of Arrive joint
DESP[23]	AJC	C of Arrive joint
DESP[24]	LJA	A of Leave joint
DESP[25]	LJB	B of Leave joint
DESP[26]	LJC	C of Leave joint
DESP[27]	BJA	A of Branch joint
DESP[28]	BJB	B of Branch joint

DESP[29]	BJC	C of Branch joint
DESP[30]	FACE	Branch connection face
DESP[31]	ITEM	Item number
DESP[32]	MATL	Material
DESP[33]	GAUG	Gauge (mm)
DESP[34]	SEAM	Longitudinal seam
DESP[35]	STOC	Stock number
DESP[36]	WKSF	Works fit
DESP[37]	SPLI	Splitters
DESP[38]	SEAL	Sealant
DESP[39]	SWAG	Swage
DESP[40]	SHAP	SHAPE
DESP[41]	ABRA	A of Branch
DESP[42]	BBRA	B of Branch
DESP[43]	BRAD	Radius B
DESP[44]	ATRN	Airturns
DESP[45]	ATSI	Airturn size
DESP[46]	REXT	Rectangular extension
DESP[47]	CEXT	Circular extension
DESP[48]	FEXT	Flatoval extension
DESP[49]	CLHE	Centreline height
DESP[50]	STAT	Manufacturing status
DESP[51]	MANU	Manufacturer
DESP[52]	TEXT	Text
DESP[53]	NOTE	Note
DESP[54]	HEIG	Height
DESP[55]	WR	Width R
DESP[56]	WL	Width L
DESP[57]	BOTT	Bottom
DESP[58]	ARRJ	Arrive joint type
DESP[59]	LEAJ	Leave joint type
DESP[60]	BJNT	Branch joint type
DESP[61]	CRAD	Radius C
DESP[62]	DRAD	Radius D
DESP[63]	BANG	Angle B
DESP[64]	FJNT	Joint to Main
DESP[65]	FVAL	Joint to Main size
DESP[66]	TYPE	Type
DESP[67]	SUBT	Subtype

DESP[68]	AVAL	Arrive joint type size
DESP[69]	LVAL	Leave joint type size
DESP[70]	BVAL	Branch joint type size
DESP[81]	ISRF	Internal Surface Area M2
DESP[82]	ESRF	External Surface Area M2
DESP[83]	TSRF	Total Surface Area M2
DESP[84]	KGMC	Mass Density Kg/M3
DESP[85]	SWEI	Sheet Weight Kg
DESP[86]	FWEI	Flanges Weight Kg
DESP[87]	TWEI	Total Component Weight Kg

1.2 建立SCOM, 如下图, Dtref均指向/CADCHVACCATA-DTSE-COMMON



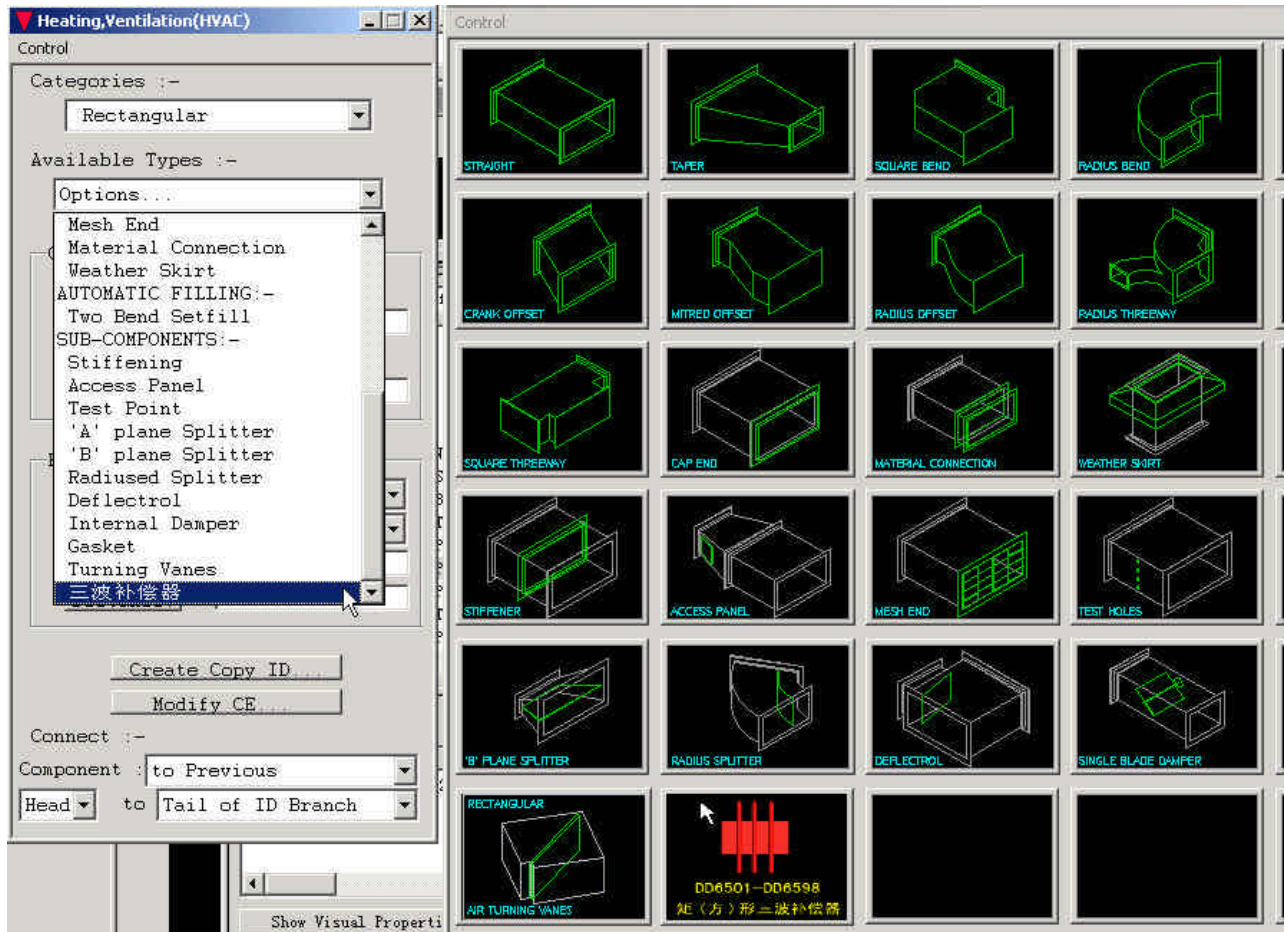
2 把该元件加入等级/CADCHVACSPEC,如下:

OLD SPEC /CADCHVACSPEC

HEADING

TYPE	NAME	PBOR0	STYP	CATREF	DETAIL	MATXT	CMPREF	BLTREF
PCOM	*/BCQ 0.00	TBCQ	/BCQ	/BCQ-D	=0	=0	=0	

3 创建该元件的图标及列表



3.1 创建图片bcq.png(尺寸:127x88;格式.png),并放到目录

D:\AVEVA\Pdms11.5\pdmsui\ICONS\HVACADV下

3.2 如下编辑文件:D:\AVEVA\Pdms11.5\pdmsui\DES\HVACADV\FGENRECT,显示图标:

```
tooltip'Gasket' pixmap HVACPIX RGASKET.png width 125 height 90 CALL |CALLDCT FNRGASKET
```

29

```
GEN21 ymax_GEN21+0.2 tooltip'Air Turning Vanes' pixmap HVACPIX RATURN.png width 125 height 90 CALL |CALLDCT FNRATURN
```

30

```
tooltip'三波补偿器' pixmap HVACPIX bcq.png width 125 height 90 CALL |CALLDCT FNBCQ pcom BCQ|
```

```
tooltip'Blank' pixmap HVACPIX BLANK.png width 125 height 90 CALL |CALLDCT MTEMP|
```

```
tooltip'Blank' pixmap HVACPIX BLANK.png width 125 height 90 CALL |CALLDCT MTEMP|
```

```
tooltip'Blank' pixmap HVACPIX BLANK.png width 125 height 90 CALL |CALLDCT MTEMP|
```

3.3 如下编辑文件: D:\AVEVA\Pdms11.5\pdmsui\DES\HVACADV\INRECTSHAPES,添加列表

Mitred Elbow	RMELBOW
Crank Offset	RCRANK
Mitred Offset	RMOFFS
Radiused Offset	RSWAN
Radiused Threeway	RTHRE
Twin Bend Threeway	TTHRE
Square Threeway	STHRE
Cap End	RCAP
Mesh End	RMESH
Material Connection	RMATL
Weather Skirt	RSKIRT
AUTOMATIC FILLING:-	MTEMP
Two Bend Setfill	RSETFILL
SUB-COMPONENTS:-	MTEMP
Stiffening	RSTIF
Access Panel	RACCE
Test Point	RTHOLE
'A' plane Splitter	ASPLI
'B' plane Splitter	BSPLI
Radiused Splitter	RSPLI
Deflectrol	RDEFL
Internal Damper	RSBD
Gasket	RGASK
Turning Vanes	RATRN
三波补偿器	BCQ

exit

\$* end of code

3.4. 如下编辑文件: D:\AVEVA\Pdms11.5\pdmsui\DES\HVACADV\MNHUMANR,调用元件创建序FNBCQ:

```

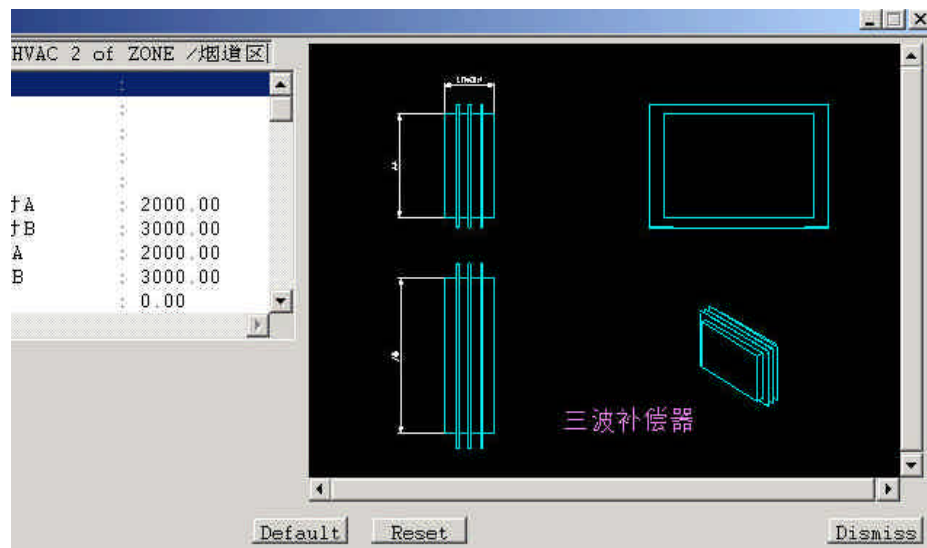
callldct FNSETFILL
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'RSKIRT') THEN
callldct FNRSKIRT
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'RMESH') THEN
callldct FNRMESH
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'RTHOLE') THEN
callldct FNRTHOLE
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'RACCE') THEN
callldct FNRACCE
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'BCQ') THEN
callldct FNBCQ PCOM BCQ
RETURN
ELSEIF ('$_ITEMSLIST' EQ 'ASPLI') THEN
IF (TYPE OF OWNE EQ 'BRAN') THEN

```

- 4 程序FNBCQ,放在目录: D:\AVEVA\Pdms11.5\pdmsui\DES\HVACADV下, 自动插入元件,并调用Modify Properties界面 如下:

```
!DESP2 = DESP[4]
!DESP3 = DESP[5]
NEW $1
DESP N2 $!DESP2
DESP N3 $!DESP3
DESP N4 $!DESP2
DESP N5 $!DESP3
SPREF /CADCHVACSPEC/$2
LSTUBE /CADCHVACSPEC/RTUBE
COMM
!!comProp(!ce, 'EDIT')
```

- 5 为该元件建立示意图



- 5.1 在DRAFT中生成该元件视图,标注相关尺寸说明,并转换成PLT格式文件BCQ,注意文件名应与SCOM的名称相同,该文件放在目录D:\AVEVA\Pdms11.5\pdmsui\PLOTS\HVACADV下

6. 如下测试新建的元件:

