

PETRO 2018



1

PETRO MODULE 2018

TIMER / TRIGGER

- New kind of component : TIMER
- Used to start thing after something else.



timer1



2

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TIMER / TRIGGER

Start

Properties of 'Timer' - timer1

Number

1

Name (☒ Automatic)

timer1

Description

Start

Waiting

Reset

Start condition

Assignment

Relationships on conditions: ☒ and ☐ or ☐ manual

Add a criteria:

#1:

GasTurbine1

State

==

Reparation

OK

Cancel

Help

Properties of 'Timer' - timer1

Number

1

Name (☒ Automatic)

timer1

Description

Start

Waiting

Reset

Start condition

Assignment

MyVariable = true;

TimeStartCount = TimeStartCount + 1;

Tools

Syntactic

Semantic

Variables

Parameters

Functions

bool

OK

Cancel

Help

3

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TIMER / TRIGGER

Waiting

Properties of 'Timer' - timer1

Number

1

Name (☒ Automatic)

timer1

Description

Start

Waiting

Reset

Waiting delay (h)

0 0

Transition with memory

☐

Waiting condition

Assignment

Relationships on conditions: ☒ and ☐ or ☐ manual

Add a criteria:

#1:

GasTurbine1

State

==

Work

OK

Cancel

Help

4

2

TIMER / TRIGGER

● Reset

Properties of Timer - timer1

Number: 1

Name (Automatic): timer1

Description:

Start Waiting Reset

Reset condition Assignment

Relationships on conditions: * and * or manual

Add a criteria:

#1: GasTurbine2 Capacity > 0

OK Cancel Help

Properties of Timer - timer1

Number: 1

Name (Automatic): timer1

Description:

Start Waiting Reset

Reset condition Assignment

Tools

Syntactic

Semantic

Variables

Parameters

Functions

bool

Add a criteria:

OK Cancel Help



5

CONDITION TO REPAIR

● “Fail to start” may have specific repair condition

Properties of Equipments - GasTurbine3

Description Start-up phase Critical failures

Start-up configuration

Start-up time from 0% to 100% capacity: 0.0

Number of steps before starting full: 2.0

Delay before start-up (h): 0.0

Start-up priority: 0.0

Equipable start-up transitions

Start-up failure

Fail to start probability (v): 0.0

Delay before fail to start: 0.5

MTTR (h): 100

Maintenance crew: ES

Spare parts: ES

Conditions for start-up Conditions for shutdown Condition to repair

Relationships on conditions: * and * or manual

Add a criteria:

#1: GasTurbine1 State == Work

OK Cancel Help



6

TANK UPDATE

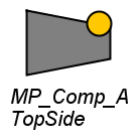
- Tank level is update when need
 - Discreate change
 - Change time is known thank to current level and throughput
- New parameter will be available to specify the level update frequency (if you want to use it to trigger something)



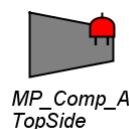
7

NEW DISPLAY ACCORDING TO CONDITIONS

- Condition to start not fulfilled



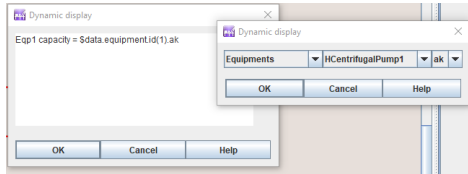
- Utility condition not fulfilled



8

DYNAMIC DISPLAY

- Equipment data are available in dynamic displays.



Ecp1 capacity = 2E2



OUTPUT ICON

- Dynamic color for each output



*Water_Inj
TopSide
water : 2.6E2 Mm³/h (100 %)*



*Oil_Exp
TopSide
oil : 1.0015E2 Mm³/h (50 %)*



*Oil_Exp
TopSide
oil : 0 Mm³/h (0 %)*



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ADDITIONAL FAILURE

Only necessary columns

Properties of Equipments' - HCentrifugalPump76

Description

Start-up phase

Utility

Critical failures

Additional failures

Additional failures

13 hidden columns

Name	Failure law	Capacity duri...	Repair law	Capacity duri...	Maintenance	Spare parts
AdditionalFail...exp 0.001	exp 0.001	0%	exp 0.001	0%		
AdditionalFail...exp 0.001	exp 0.001	0%	exp 0.001	0%		

Condition to repair

Relationships on conditions: ☒ and ☐ or ☐ manual

Add a criteria:

OK Cancel Help

11

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LOOP DETECTION IMPROVMENT

Now detects loops even if filtered

Error

Analysis Moca error

Loop detected in time 56 653,206

Loop sequence before

2: 851 => Motor_MP_KB_Initialised_PC1

10: 333 => MP_Comp_B_Work_to_SB

11: 846 => Motor_MP_KB_sax_Resources_PC1

12: 847 => Motor_MP_KB_Resources_Mobilization_PC1

13: 849 => Motor_MP_KB_Approach_to_StartRep_PC1

30: 1021 => Flares_1_to_Work

Loop

31: 278 => MP_Comp_A_Work_to_SB

32: 300 => MP_Suction_Drum_Work_to_SB

33: 816 => Motor_MP_KA_Work_to_SB

46: 801 => MP_Suction_Drum_SB_to_Work

47: 279 => MP_Comp_A_SB_to_Work

48: 819 => Motor_MP_KA_SB_to_Work

OK Cancel Help

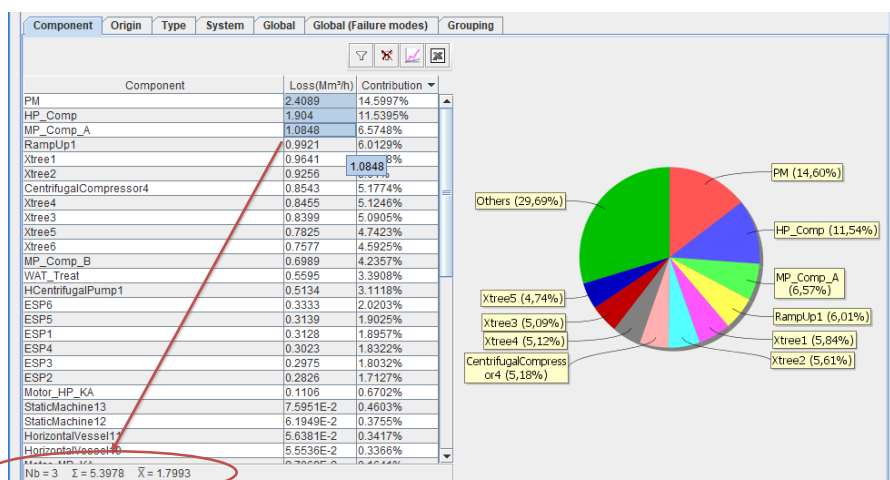
12

PROFILES IMPORT AND LINK

- Import profiles from EXCEL and keep the link (to be done)

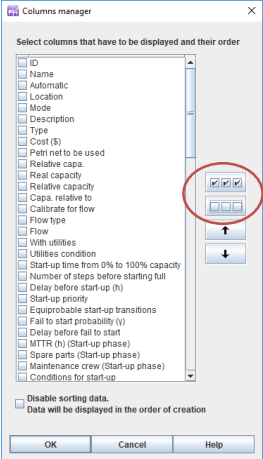


SELECTION INFO IN STATE BAR




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COLUMN MANAGER (V2017)



The image shows a screenshot of the 'Columns manager' dialog box. It has a title bar 'Columns manager' and a close button. The main area is titled 'Select columns that have to be displayed and their order'. It contains a list of columns with checkboxes: ID, Name, Automatic, Location, Mode, Description, Type, Cost (\$), Petri net to be used, Relative capa., Real capacity, Relative capacity, Capa. relative to, Calibrate for flow, Flow type, Flow, With utilities, Utilities condition, Start-up time from 0% to 100% capacity, Number of steps before starting full, Delay before start-up (h), Start-up priority, Equiprobable start-up transitions, Fail to start probability (y), Delay before fail to start, MTTR (h) (Start-up phase), Spare parts (Start-up phase), Maintenance crew (Start-up phase), and Conditions for startup. There are also checkboxes for 'Disable sorting data.' and 'Data will be displayed in the order of creation'. At the bottom are 'OK', 'Cancel', and 'Help' buttons. A red circle highlights the 'Relative capacity' and 'Capa. relative to' checkboxes, which are both checked.



15

THE END 😊



The logo consists of a cluster of dots in black, blue, and green, arranged in a roughly circular pattern.

SATODEV

SAFETY TOOLS DEVELOPMENT

16