

Getting started with ProSec[®] in ProSimPlus[®] environment

Use Case 2: Import/export parameters/results
Use case study capability
Define a specification

Software & Services In Process Simulation

We guide You to efficiency



ProSim

Introduction

- This document presents how to modify a parameter to meet a specification in ProSec, ProSim's CAPE-OPEN compliant unit operation dedicated to the simulation of brazed plate-fin heat exchangers.
- The objective is to determine the splitting ratio of a side stream to obtain a specified heat duty.
- In this document, ProSec is used in ProSimPlus, ProSim's steady state simulation software.
- This step by step guide starts after the "Main features overview" getting started with ProSec in ProSimPlus environment document. It's advise to start by this first getting started before doing this one.

Methodology

- To exchange information between ProSec CAPE-OPEN unit operation and the simulation environment, inlet and outlet information ports have to be defined in ProSec.
 - Inlet port: Information port by which a parameter of the CAPE-OPEN unit operation is available for the simulation environment (e.g. to modify it during the simulation).
 - Outlet port: Information port by which a result of the CAPE-OPEN unit operation can be recovered in the simulation environment (e.g. to compare it to a set point).



The inlet and outlet parameters are expressed in ISO units.

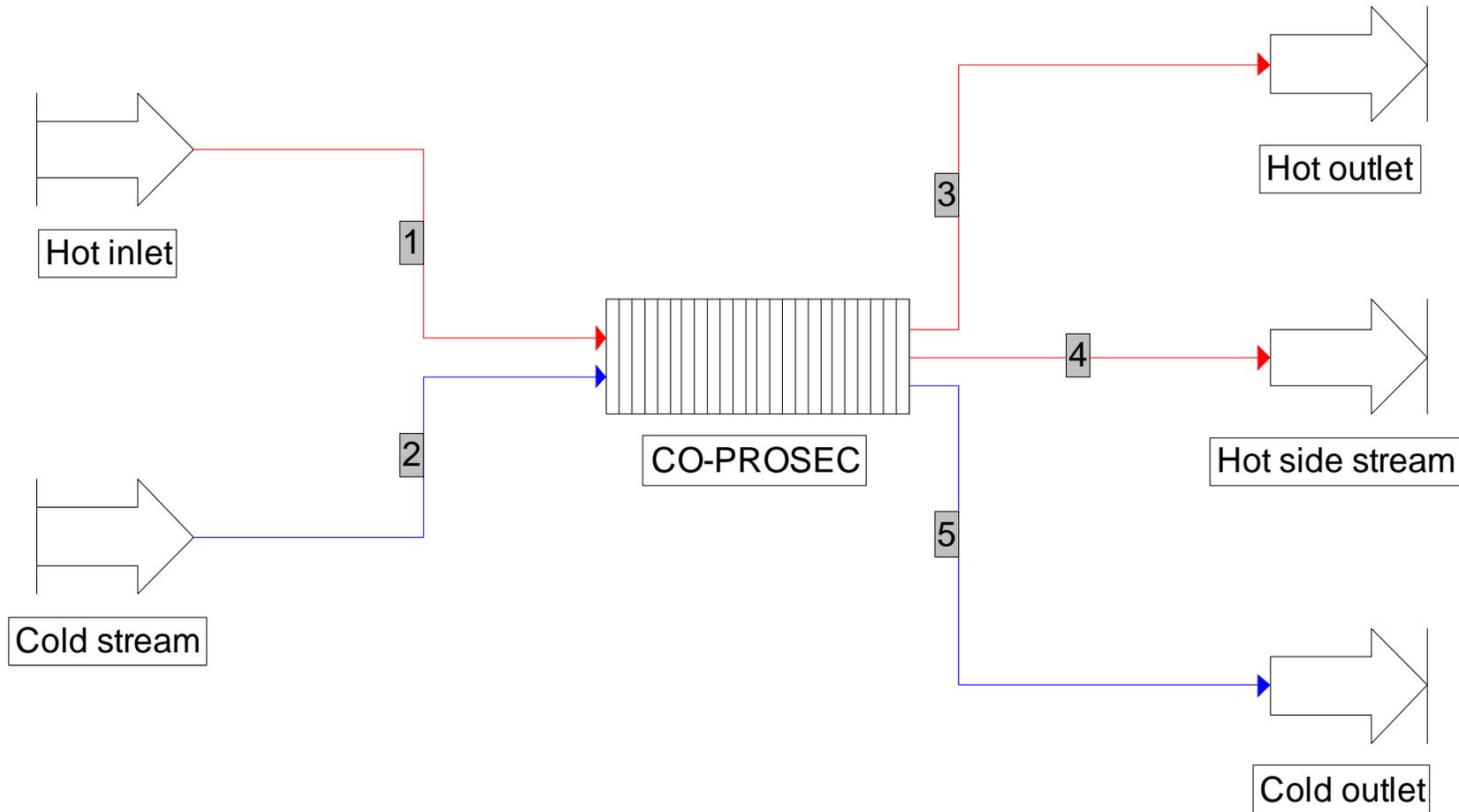
- In ProSimPlus simulation environment, the inlet and outlet information port have to be connected to windows script unit operations to be used during the simulation.

Methodology

- The methodology is:
 - Specify the inlet and outlet information ports in ProSec.
 - Create the windows script unit operations in ProSimPlus and connect them to ProSec.
 - Use the case study capability of ProSimPlus to check:
 - If the splitting ratio has an impact on the exchanger heat duty
 - If the specification can be reached
 - Set up the control in the simulation using a “Constraints & recycles management” module.

Starting point

- Simulation obtained at the end of the “Main features overview” getting started with ProSec in ProSimPlus environment document.



Step 1: Add information ports in ProSec

- Open (edit) ProSec unit operation.
- Go to “Information ports” tab
 1. Click on “Add an inlet port” to add the inlet information port

The screenshot shows the ProSec software interface. The title bar reads "CO-PROSEC - CO-ProSec". The main window has a blue header with "HOME" and "PORTS" tabs. Below the header, there is a "Management of the port list" section with four icons: "Add an inlet port", "Add an outlet port", "Duplicate the selected port", and "Delete the selected port". A red box highlights these icons, and a red arrow points to them with the text "Management of the port list". Below this is a "PARAMETERS | CATALYSTS | STREAMS | FINS | REFERENCE LAYERS | INFORMATION PORTS | REPORTS | RESULTS | VALIDATION" navigation bar. The main content area is divided into "Inlet information ports" and "Outlet information ports" sections. The "Inlet information ports" section has a table with columns: "#", "Imported parameter", "Stream", "Sidestream", "Zon...", and "Name". The "Outlet information ports" section has a table with columns: "#", "Exported parameter", "Stream", "Sidestream", and "Name".

Step 1: Add information ports in ProSec

- “Information ports” tab
 2. In the “Imported parameter” menu, select “Splitting ratio of flowrate (%)”

The screenshot shows the ProSec software interface with the 'INFORMATION PORTS' tab selected. The 'Imported parameter' dropdown menu is open, and 'Splitting ratio of flowrate (%)' is selected. The table below shows the configuration for this port.

Inlet information ports					Outlet information ports					
#	Imported parameter	Stream	Sidestream	Zon...	Name	#	Exported parameter	Stream	Sidestream	Name
1	Splitting ratio of flowrate (%)	Hot	Side_Hot		Splitting ratio of flowrate (%)					

Step 1: Add information ports in ProSec

- “Information ports”
 3. In the “Stream” menu, select “Hot” (i.e. the name of the hot stream)
 4. In the “Sidestream” menu, select “Side_Hot” (i.e. the name of the side stream of the hot stream)
 5. Option: The name of the imported parameter can be changed

CO-PROSEC - CO-ProSec

HOME PORTS

Add an inlet port Add an outlet port Duplicate the selected port Delete the selected port

Edit ports

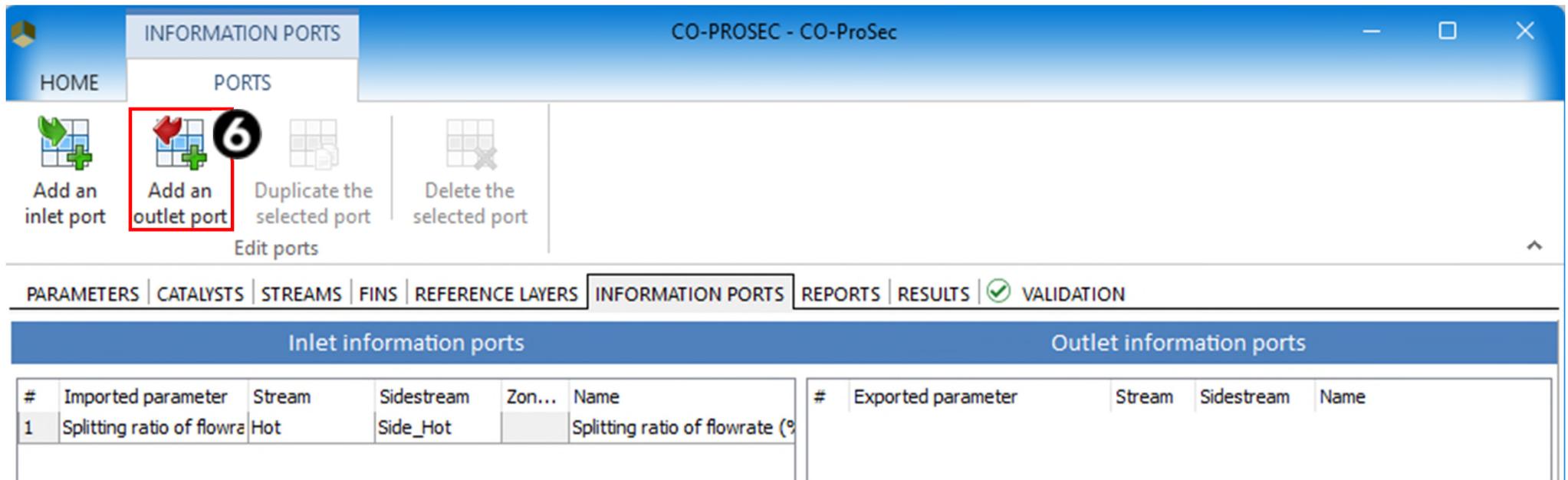
PARAMETERS CATALYSTS STREAMS FINS REFERENCE LAYERS INFORMATION PORTS REPORTS RESULTS VALIDATION

Inlet information ports					Outlet information ports				
Imported parameter	Stream	Sidestream	Zone #	Name	#	Exported parameter	Stream	Sidestream	Name
Splitting ratio of flowrate (%)	Hot	Side_Hot		Splitting ratio of flowrate (%) - Hot-Side_f					

3 4 5

Step 1: Add information ports in ProSec

- “Information ports”
 6. Click on “Add an outlet port” to add the outlet information port



The screenshot shows the 'INFORMATION PORTS' window in ProSec. The 'PORTS' tab is selected, and the 'Add an outlet port' button is highlighted with a red box and a large number '6'. Below the toolbar, there are two tables: 'Inlet information ports' and 'Outlet information ports'.

Inlet information ports					Outlet information ports					
#	Imported parameter	Stream	Sidestream	Zon...	Name	#	Exported parameter	Stream	Sidestream	Name
1	Splitting ratio of flowra	Hot	Side_Hot		Splitting ratio of flowrate (%)					

Step 1: Add information ports in ProSec

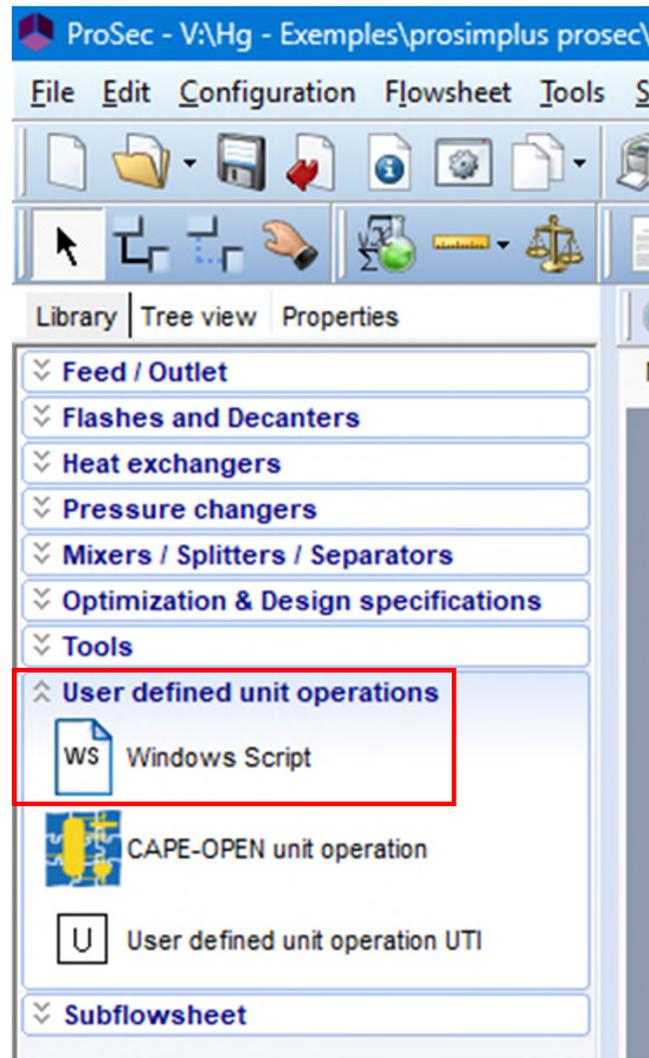
- “Information ports” tab
 7. In the “Exported parameter” menu, select “Heat duty for the hot streams”
 8. Option: The name of the exported parameter can be changed

The screenshot shows the ProSec software interface with the 'INFORMATION PORTS' tab selected. The 'Exported parameter' dropdown menu is open, showing a list of options. The 'Heat duty for hot streams' option is selected, and its name is highlighted in the table below. A red box highlights the dropdown menu and the selected option. A black circle with the number 7 is placed over the dropdown arrow, and another black circle with the number 8 is placed over the selected option in the table.

Inlet information ports					Outlet information ports					
#	Imported parameter	Stream	Sidestream	Zon...	Name	#	Exported parameter	Stream	Sidestream	Name
1	Splitting ratio of flowra	Hot	Side_Hot		Splitting ratio of flowrate (%)	2	Heat duty for hot streams			Heat duty for hot streams

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Add the first windows script module (named “Data”) to allow the modification of the splitting ratio in ProSec by ProSimPlus.



Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- The value of the splitting ratio is stored in the position #1.

Windows Script (\$XTMO2)

Name: Data
Desc:

Identification Scripts Report Streams Notes

PAR size: 20

Index	Par	Info
1	10	Splitting ratio (%)
2	0	
3	0	
4	0	
5	0	
6	0	
7	0	
8	0	
9	0	
10	0	
11	0	
12	0	
13	0	

Main function declarations

Parameters of the unit operation usable in the script

```
1 '-----  
2 ' Validation of this module  
3 '-----  
4 Function OnCalculation()  
5   OnCalculation = True  
6 End Function  
7 '-----
```

To indication that the calculation of this unit operation is well done: ✓ in the simulation progress window

Value of the splitting ratio

OK Cancel

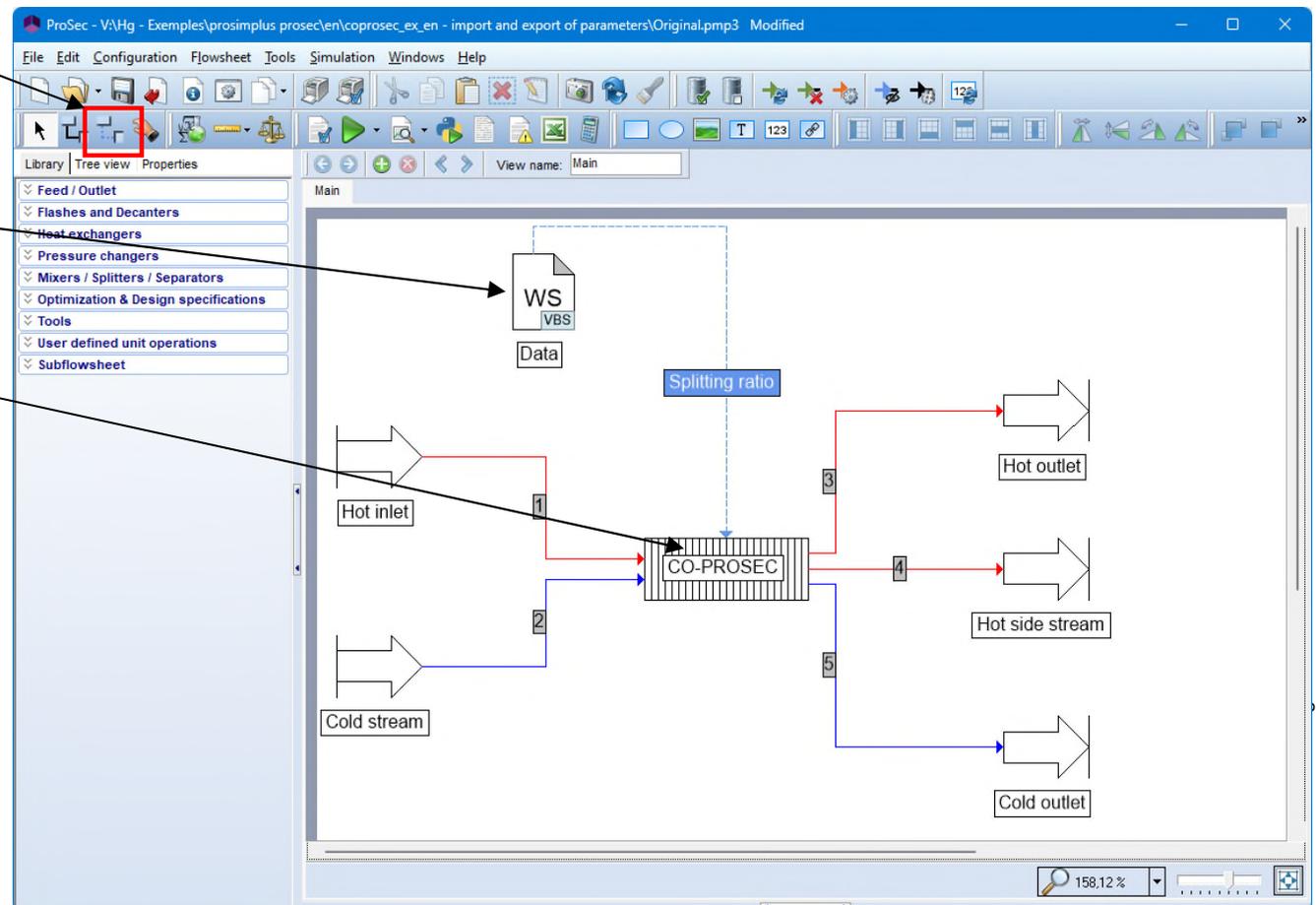


Use the “Info” cells to comment the parameters

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Use an information stream to connect the “Data” windows script and the ProSec modules. By this way the splitting ratio value stored in “Data” will erase the one stored in ProSec.

- Select the “Create an information stream” icon
- Select the first unit operation (source) by clicking on it
- Select the connected unit operation (target) by clicking on it as well



Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Enter the parameters in this information stream. Feel free to change the default name.

Information sent by the windows script module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the splitting ratio in the windows script module

Index	Par	Info
1	10	Splitting ratio (%)
2	0	

Information stream (\$ISTR2)

Name:

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter ...

Supply here the first and the last locations of the information stream to be emitted from "Data"

Start: End:

Information type to be received:

Defined by its position in the unit block's parameter ...

Supply here the first and the last locations of the information stream to be received in "CO-PROSEC"

Start: End:

OK Cancel

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Enter the parameters in this information stream. Feel free to change the default name.

Information received by ProSec module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the splitting ratio in the information port list of ProSec

#	Imported parameter	Stream	Sidestream	Zon...	Name	#	Exported parameter
1	Splitting ratio of flowrate (%)	Hot	Side_Hot		Splitting ratio of flowrate (%)	2	Heat duty for hot streams

Information stream (\$ISTR2)

Name: Inf

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter zone ...

Supply here the first and the last locations of the information stream to be emitted from "Data"

Start: 1 End: 1

Information type to be received:

Defined by its position in the unit block's parameter zone ...

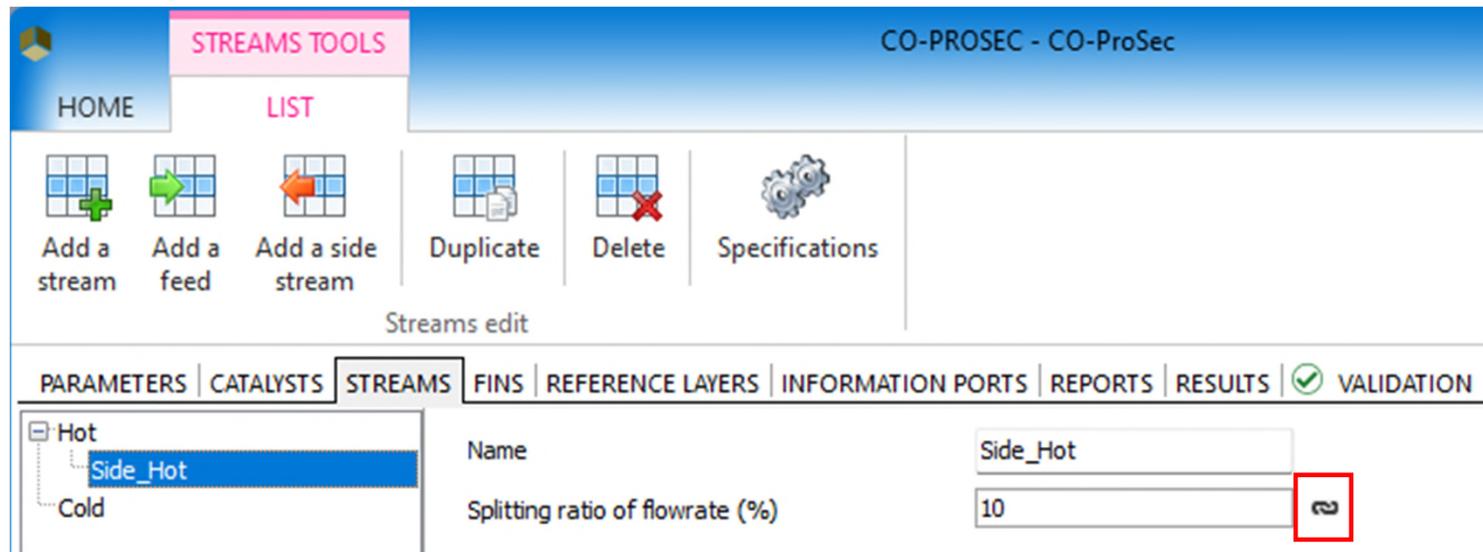
Supply here the first and the last locations of the information stream to be received in "CO-PROSEC"

Start: 1 End: 1

OK Cancel

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- In ProSec interface, the  sign in front of a parameter indicates that it can be modified through an information stream (e.g. the splitting ratio in this getting started).



The screenshot shows the ProSec interface with the 'STREAMS TOOLS' menu open. The menu includes options: 'Add a stream', 'Add a feed', 'Add a side stream', 'Duplicate', 'Delete', and 'Specifications'. Below the menu is a navigation bar with tabs: 'PARAMETERS', 'CATALYSTS', 'STREAMS', 'FINS', 'REFERENCE LAYERS', 'INFORMATION PORTS', 'REPORTS', 'RESULTS', and 'VALIDATION'. The 'STREAMS' tab is active, showing a tree view with 'Hot' expanded to 'Side_Hot' and 'Cold'. The 'Side_Hot' parameter is selected, and its details are shown in a table:

Name	Value
Side_Hot	10
Splitting ratio of flowrate (%)	10

The '10' value in the second row is highlighted with a red box and a wavy sign icon, indicating it is a parameter that can be modified through an information stream.

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Add the second windows script module (named “Results”) to recover the exchanger heat duty and compare it to a set point.

Position 1:
Exchanger heat duty, value from ProSec by the information stream

Position 2:
Heat duty set point

Position 3:
Deviation between the heat duty calculated by ProSec and the heat duty set point



Give names to recover the parameters easily in the “Case study”.

Index	Par	Info
1	0	Heat duty - Hot streams (W)
2	-102500	Heat duty specification (W)
3	0	Heat duty deviation (W)
4	0	
5	0	
6	0	
7	0	
8	0	
9	0	
10	0	
11	0	
12	0	
13	0	
14	0	

```
1 ' -----
2 ' Use of the units conv
3 ' -----
4 With CreateObject("Scri
5   ExecuteGlobal .OpenTe
6 End With
7 ' -----
8 ' Calculation of the de
9 ' -----
10 Function OnCalculation
11 ' Data recovering
12 ' -----
13   Q_CALC = Module.Paran
14   Q_SPEC = Module.Paran
15
16 ' Calculation of the de
17 ' -----
18   Deviation = 1. - Q_SI
19
20 ' Steps of the deviat
```

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Add the second windows script module (named “Results”) to recover the exchanger heat duty and compare it to a set point.

```
1 '-----
2 ' Use of the units conversions pre-coded script
3 '-----
4 With CreateObject("Scripting.FileSystemObject")
5   ExecuteGlobal .OpenTextFile(Project.ApplicationPath & "Scripts\UnitConversion.vbs", 1).ReadAll()
6 End With
7 '-----
8 ' Calculation of the deviation
9 '-----
10 Function OnCalculation()
11 ' Data recovering
12 '-----
13   Q_CALC = Module.Parameter(1)
14   Q_SPEC = Module.Parameter(2)
15
16 ' Calculation of the deviation
17 '-----
18   Deviation = 1. - Q_SPEC/Q_CALC
19
20 ' Storage of the deviation
21 '-----
22   Module.Parameter(3) = Deviation
23
24 ' Validation of this module
25 '-----
26   OnCalculation = True
27 End Function
28 '-----
29 ' Impression des résultats
30 '-----
31 Sub OnPrintResults()
32 ' Report unit selected by the user
33 '-----
34   EnthalpicFlow_Unit = ReportUnit("Enthalpic flow")
35
36   Relative_Deviation = 100.*abs(Module.Parameter(2) - Module.Parameter(1))/abs(Module.Parameter(2))
37
38 ' Printings
39 '-----
40   With Module
41     .PrintReport("HEAT DUTIES")
42     .PrintReport("-----")
43     .PrintReport(" - Hot streams : " & Convert("Enthalpic flow", .Parameter(1), "W", EnthalpicFlow_Unit) & " " & EnthalpicFlow_Unit)
44     .PrintReport("")
45     .PrintReport(" - Set point : " & Convert("Enthalpic flow", .Parameter(3), "W", EnthalpicFlow_Unit) & " " & EnthalpicFlow_Unit)
46     .PrintReport(" - Deviation : " & Relative_Deviation & "%")
47   End With
48 End Sub
```

To have access to units conversions tools for the results printing.

Calculation of the deviation between ProSec value and set point value.

Printings of the results.

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Use an information stream to connect the ProSec and the “Results” windows script modules. By this way the exchanger heat duty will be available in the “Results” module.
- Enter the parameters in this information stream. Feel free to change the default name.

Information sent by ProSec module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the heat duty in the information port list of ProSec

HOME PORTS

CO-PROSEC - CO-ProSec

INFORMATION PORTS

PARAMETERS CATALYSTS STREAMS FINS REFERENCE LAYERS INFORMATION PORTS REPORTS RESULTS VALIDATION

#	Imported parameter	Stream	Sidestream	Zon...	Name	#	Exported parameter	S
1	Splitting ratio of flowrate	Hot	Side_Hot		Splitting ratio of flowrate (%)	2	heat duty for hot streams	

Information stream (SISTR)

Name:

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter zone

Supply here the first and the last locations of the information stream to be emitted from "CO-PROSEC"

Start: End:

Information type to be received:

Defined by its position in the unit block's parameter zone

Supply here the first and the last locations of the information stream to be received in "Results"

Start: End:

OK Cancel

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Enter the parameters in this information stream. Feel free to change the default name.

Information received by the windows script module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the heat duty in the windows script module

Index	Par	Info
1	Q	Heat duty - Hot streams (W)
2	-102500	Heat duty specification (W)
3	0	Heat duty deviation (W)
4	n	

Information stream (\$ISTR)

Name: Q

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter zone

Supply here the first and the last locations of the information stream to be emitted from "CO-PROSEC"

Start: 2 End: 2

Information type to be received:

Defined by its position in the unit block's parameter zone

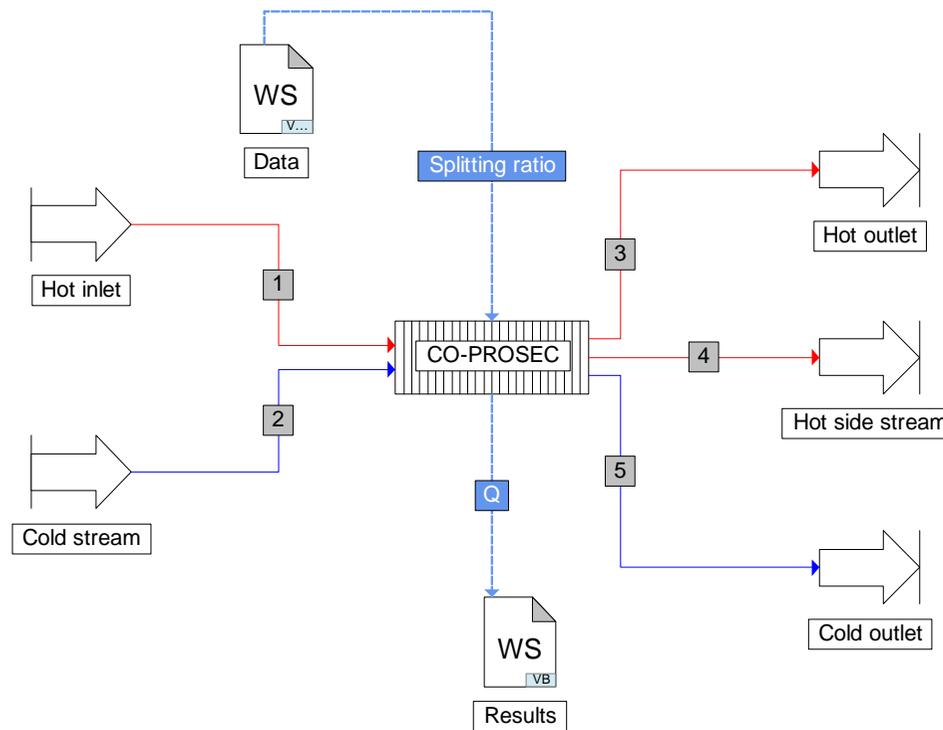
Supply here the first and the last locations of the information stream to be received in "Results"

Start: 1 End: 1

OK Cancel

Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- Flowsheet at this step



Step 2: Add windows script modules in ProSimPlus and connect them to ProSec

- E.g. specify a splitting ratio of 12% in the “Data” module and run the simulation

Windows Script (\$XTMO2) - Data

Index	Par	Info
1	12	Splitting ratio (%)
2	0	

Windows Script (\$XTMO1) - Results

EQUIPMENT: Results
TYPE: Windows Script
DESCRIPTION:

INLET INFORMATION STREAM:
Q

THERMODYNAMIC CALCULATOR: [\[New calculator\]](#)

HEAT DUTIES

- Hot streams : -88101,8743629121 kcal/h
- Set point : -8,91090404840928E-04 kcal/h
- Deviation : 0,103457361944602%

CO-PROSEC Unit

Hot inlet (1) → Cold stream (2) → Splitting ratio (3) → Hot outlet (4) → Material stream (5)

Material stream 4

Thermodynamic model: Global model
Temperature = 11.8765 °C
Pressure = 69.0125 bar
Mole flowrate = 27.473 kmol/h
Mass flowrate = 574.8 kg/h
Volume flowrate = 6.44959 m3/h
Physical state = Vapor

Partial flowrates	kmol/h	kg/h
METHANE	17.915	287.4
ETHANE	9.558	287.4

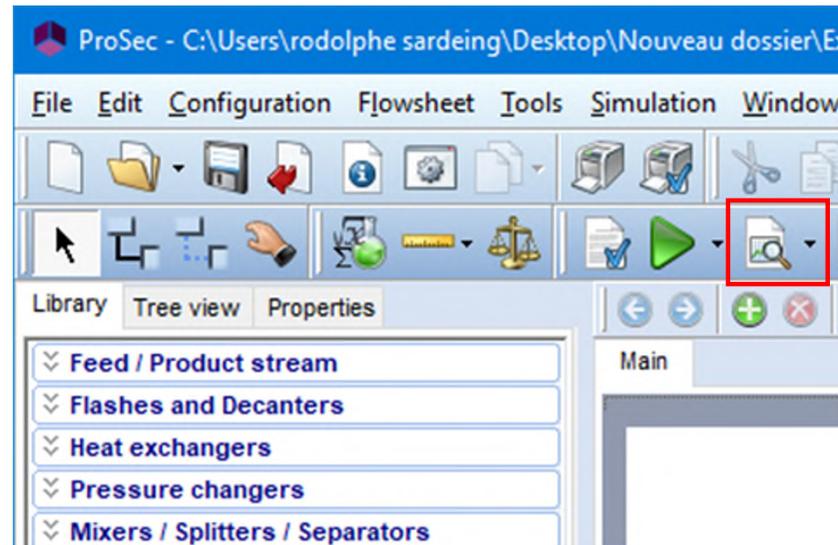
Fractions	Mole	Mass
METHANE	0.652094	0.500000
ETHANE	0.347906	0.500000

12% of stream “1” flow rate

Check that this value is the same as the one in ProSec results

Step 3: Case study

- Use the case study ProSimPlus' capability to analyze the influence of the slitting ratio of the side stream of the hot stream (stream "4") on the heat duty of the heat exchanger.
- From the "Case study" icon.



Step 3: Case study

- Selection of the studied parameter
 - Select “Data” unit operation (windows script module containing the value of the splitting ratio).
 - Select the parameter “Splitting ratio(%)”.

Case study

Parameter

Unit operation: Data (Windows Script)

Parameter: Splitting ratio (%)

Initial value: 8 Step: 1

Final value: 12 Number of points: 5

Unit:

Monitoring

Filter by

Type: All types Unit operation: All unit operations

<< Prev. Next >> No variable selected

Selected	Variable	Form	Compounds	Stages
<input type="checkbox"/>	CO-PROSEC			
<input type="checkbox"/>	Flowrate of stream 3	Molar		
<input type="checkbox"/>	Temperature of stream 3			
<input type="checkbox"/>	Pressure of stream 3			
<input type="checkbox"/>	Vapor fraction of stream 3			
<input type="checkbox"/>	Flowrate of stream 4	Molar		
<input type="checkbox"/>	Temperature of stream 4			
<input type="checkbox"/>	Pressure of stream 4			
<input type="checkbox"/>	Vapor fraction of stream 4			
<input type="checkbox"/>	Flowrate of stream 5	Molar		
<input type="checkbox"/>	Temperature of stream 5			
<input type="checkbox"/>	Pressure of stream 5			
<input type="checkbox"/>	Vapor fraction of stream 5			
<input type="checkbox"/>	Parameter #1			
<input type="checkbox"/>	Parameter #2			
<input type="checkbox"/>	Hot inlet			
<input type="checkbox"/>	Flowrate of stream 1	Molar		
<input type="checkbox"/>	Temperature of stream 1			
<input type="checkbox"/>	Pressure of stream 1			
<input type="checkbox"/>	Vapor fraction of stream 1			
<input type="checkbox"/>	Cold stream			
<input type="checkbox"/>	Flowrate of stream 2	Molar		

You must select at least one variable to be monitored.

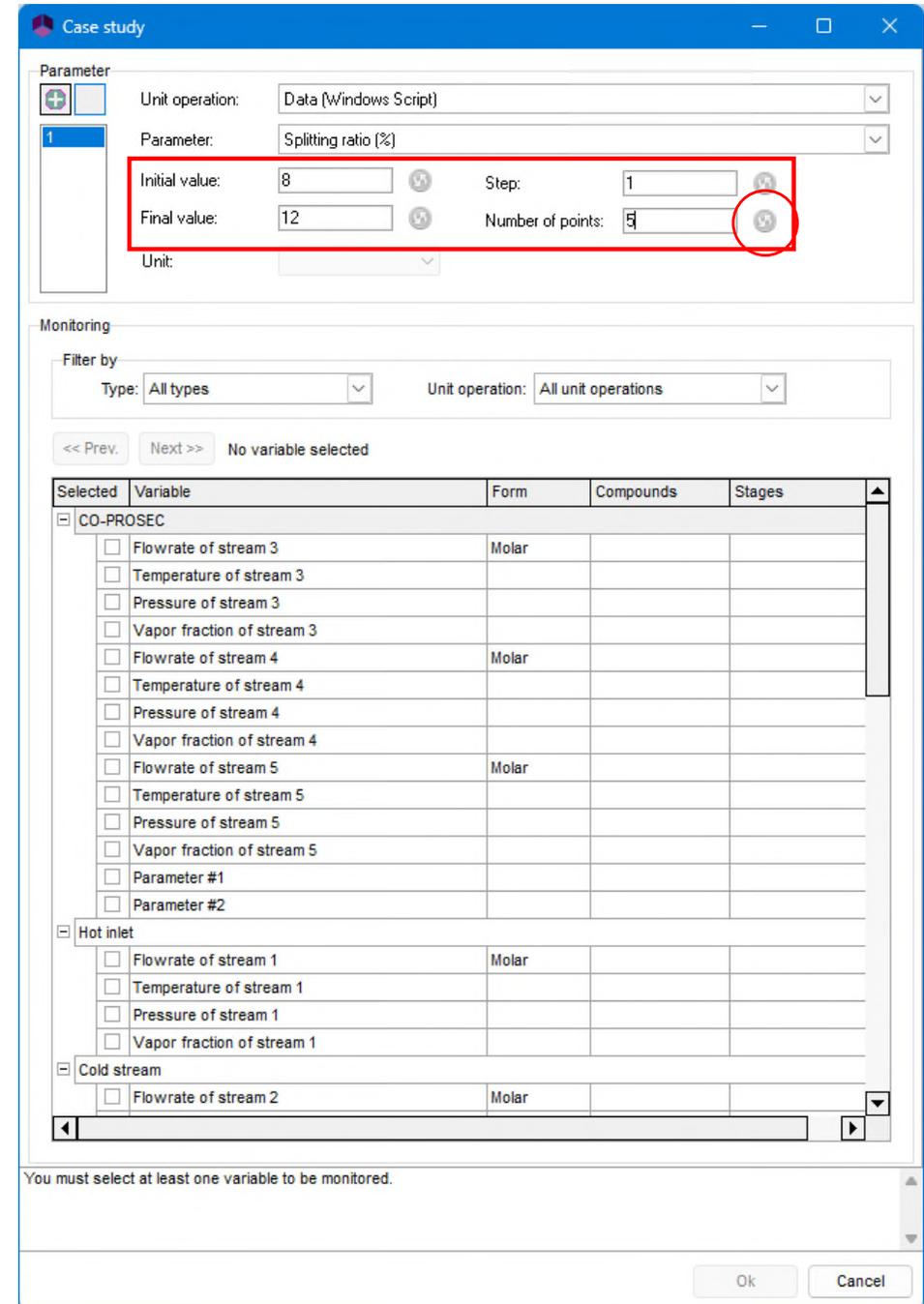
Ok Cancel

Step 3: Case study

- Specification of the range of variation of the studied variable
 - Enter the initial value of the splitting ratio (e.g. 8), its final value (e.g. 12).
 - Enter the step (e.g. 1) and click on  to update the number of points (the opposite can be done).



Select first the unit if necessary!



Case study

Parameter

Unit operation: Data (Windows Script)

Parameter: Splitting ratio (%)

Initial value: 8 Step: 1

Final value: 12 Number of points: 5

Unit:

Monitoring

Filter by

Type: All types Unit operation: All unit operations

<< Prev. Next >> No variable selected

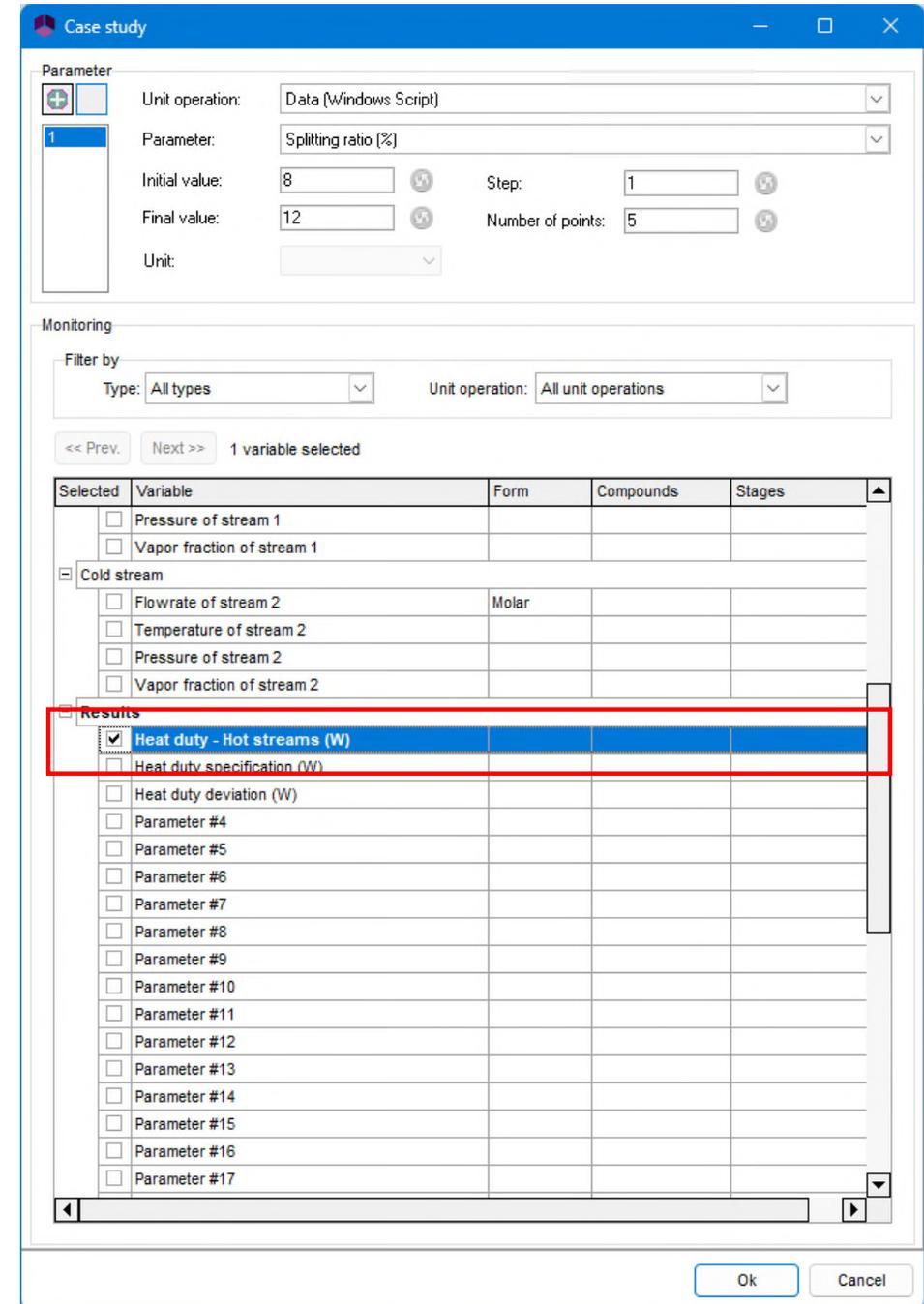
Selected	Variable	Form	Compounds	Stages
<input type="checkbox"/>	CO-PROSEC			
<input type="checkbox"/>	Flowrate of stream 3	Molar		
<input type="checkbox"/>	Temperature of stream 3			
<input type="checkbox"/>	Pressure of stream 3			
<input type="checkbox"/>	Vapor fraction of stream 3			
<input type="checkbox"/>	Flowrate of stream 4	Molar		
<input type="checkbox"/>	Temperature of stream 4			
<input type="checkbox"/>	Pressure of stream 4			
<input type="checkbox"/>	Vapor fraction of stream 4			
<input type="checkbox"/>	Flowrate of stream 5	Molar		
<input type="checkbox"/>	Temperature of stream 5			
<input type="checkbox"/>	Pressure of stream 5			
<input type="checkbox"/>	Vapor fraction of stream 5			
<input type="checkbox"/>	Parameter #1			
<input type="checkbox"/>	Parameter #2			
<input type="checkbox"/>	Hot inlet			
<input type="checkbox"/>	Flowrate of stream 1	Molar		
<input type="checkbox"/>	Temperature of stream 1			
<input type="checkbox"/>	Pressure of stream 1			
<input type="checkbox"/>	Vapor fraction of stream 1			
<input type="checkbox"/>	Cold stream			
<input type="checkbox"/>	Flowrate of stream 2	Molar		

You must select at least one variable to be monitored.

Ok Cancel

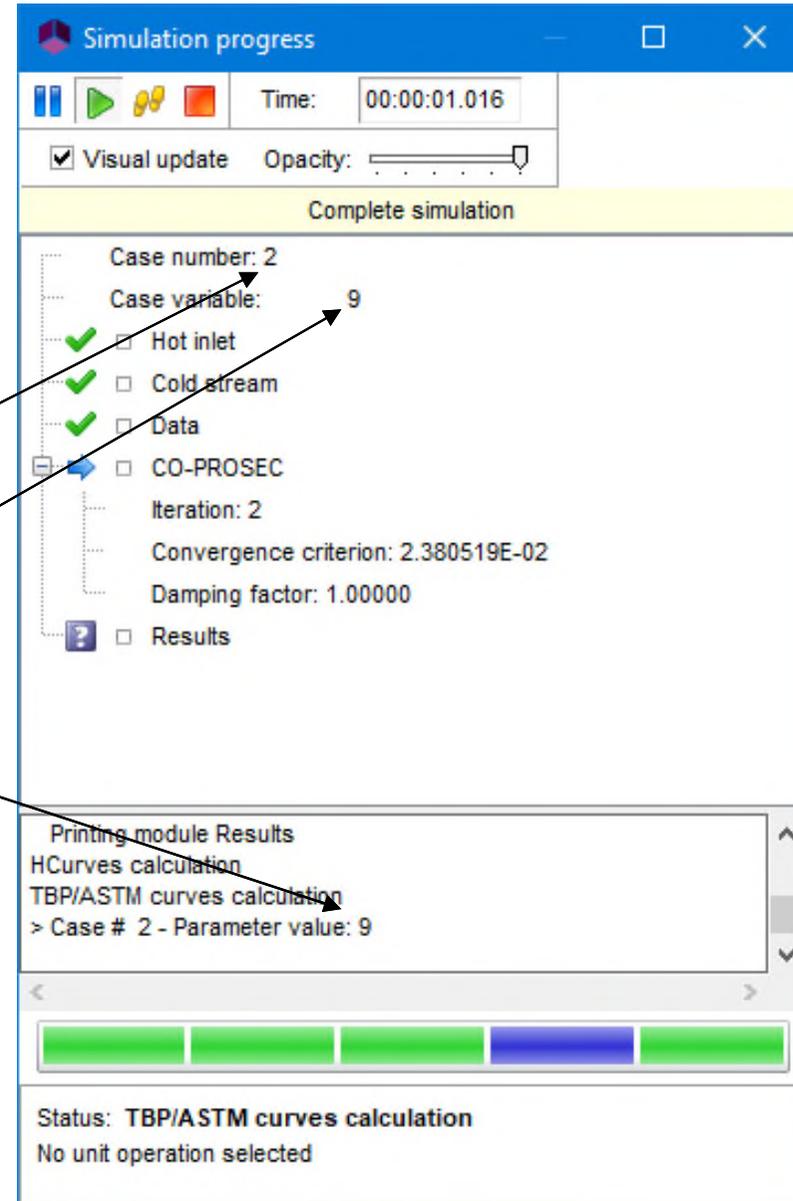
Step 3: Case study

- Select the monitored variables
 - Select “Results” unit operation (windows script module containing the exchanger heat duty).
 - Select the parameter “Heat duty - Hot streams (W)”.
- Click on “Ok” to start the case study



Step 3: Case study

- Simulation progress window

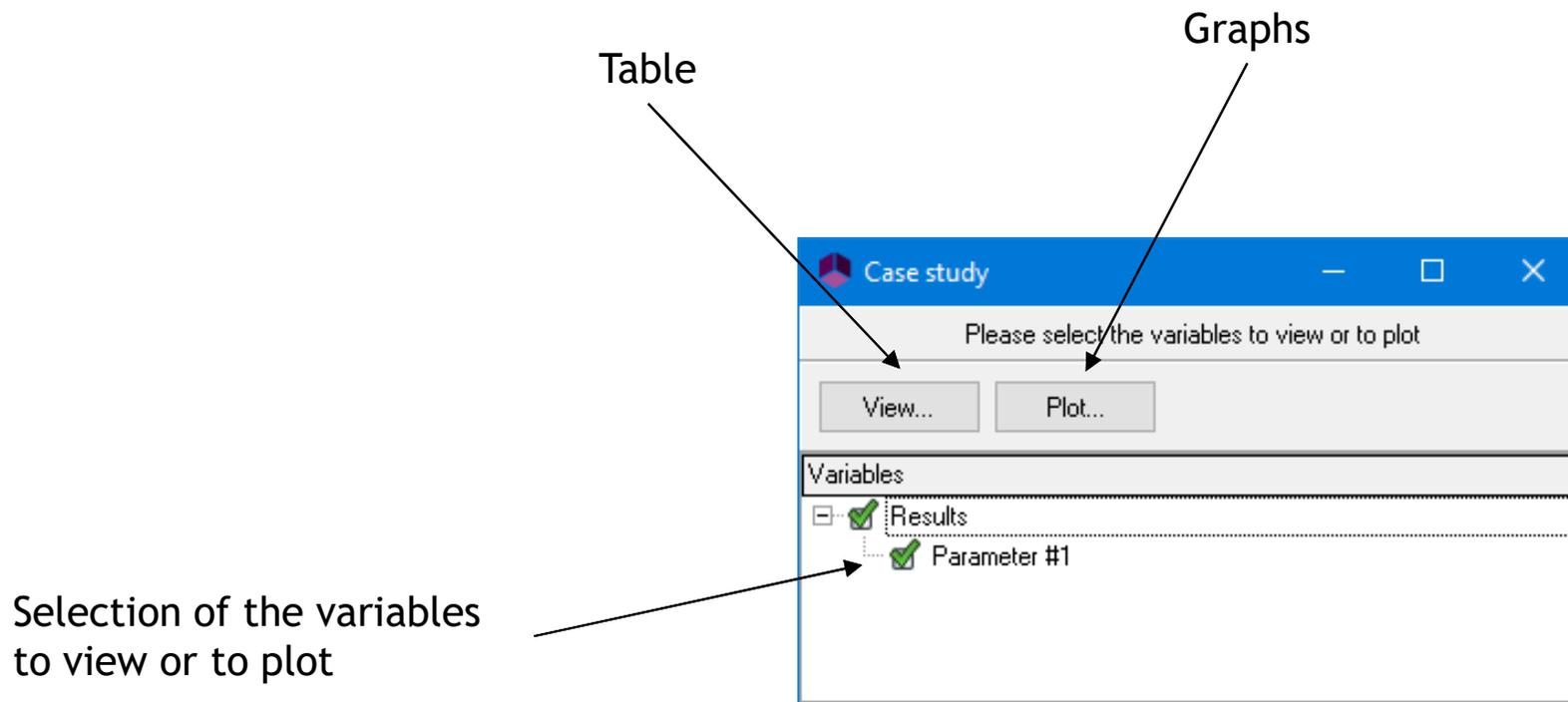


Number of the case in progress

Value of the studied parameter

Step 3: Case study

- Visualization of the case study results (tables and graphs)



Step 3: Case study

- View: Table

Select "Table"

Copy

Export in a file (xls, html, txt)

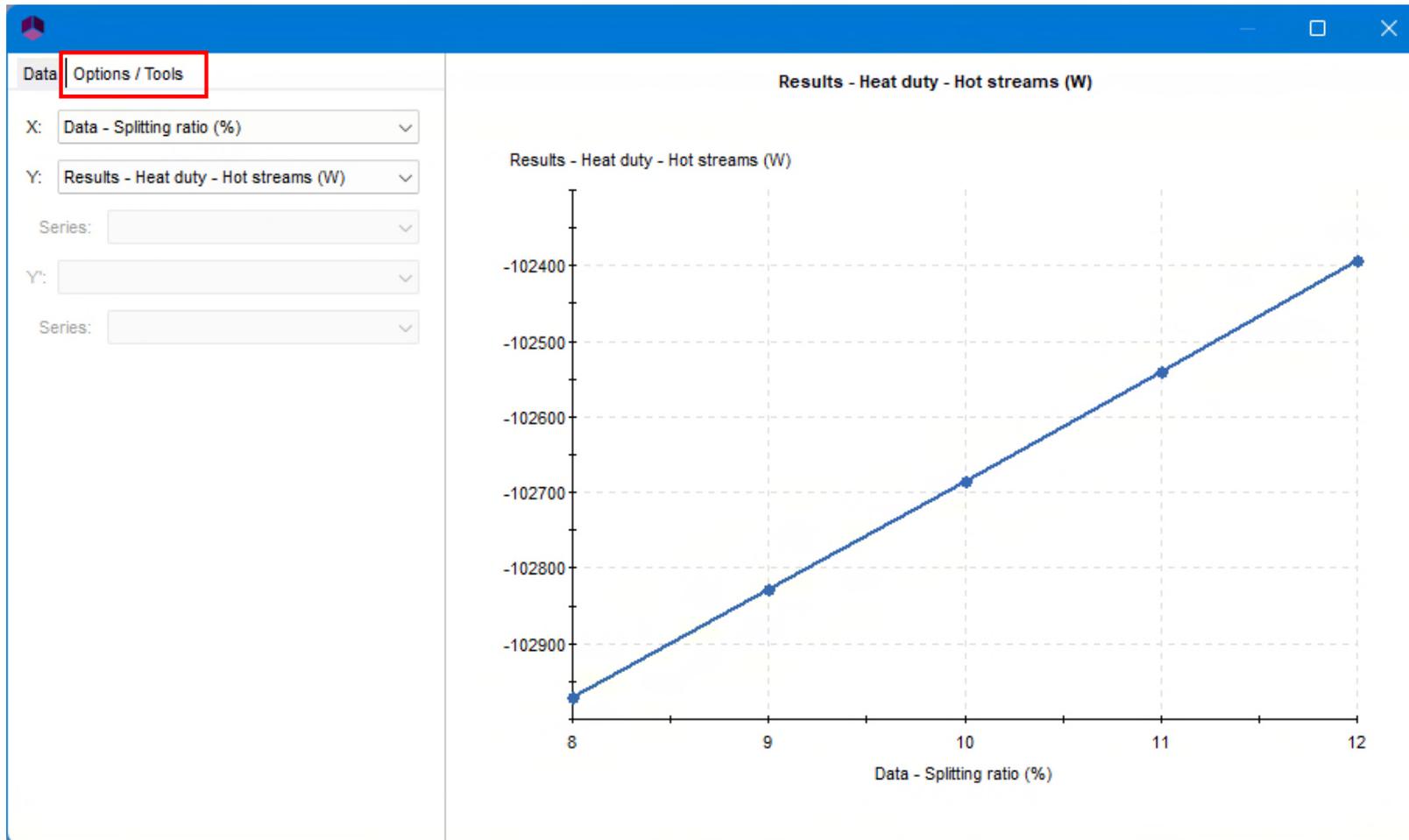
Row and column permutation

The screenshot shows a window titled 'Case study results' with a blue header. Below the header, there is a 'Raw data' section with a 'Table' button highlighted by a red box. To the left of the 'Table' button are icons for 'Copy' and 'Export in a file (xls, html, txt)'. To the right of the 'Table' button is a 'Transpose' checkbox. Below these controls is a table with two columns: 'Data Splitting ratio (%)' and 'Results Heat duty - Hot streams (W)'. The table contains five rows of data, with the first row being a header and the following four rows containing numerical values.

Data Splitting ratio (%)	Results Heat duty - Hot streams (W)
8	-102971
9	-102828
10	-102685
11	-102540
12	-102393

Step 3: Case study

- Plot: Graphs (options: copy, print, graphical properties)

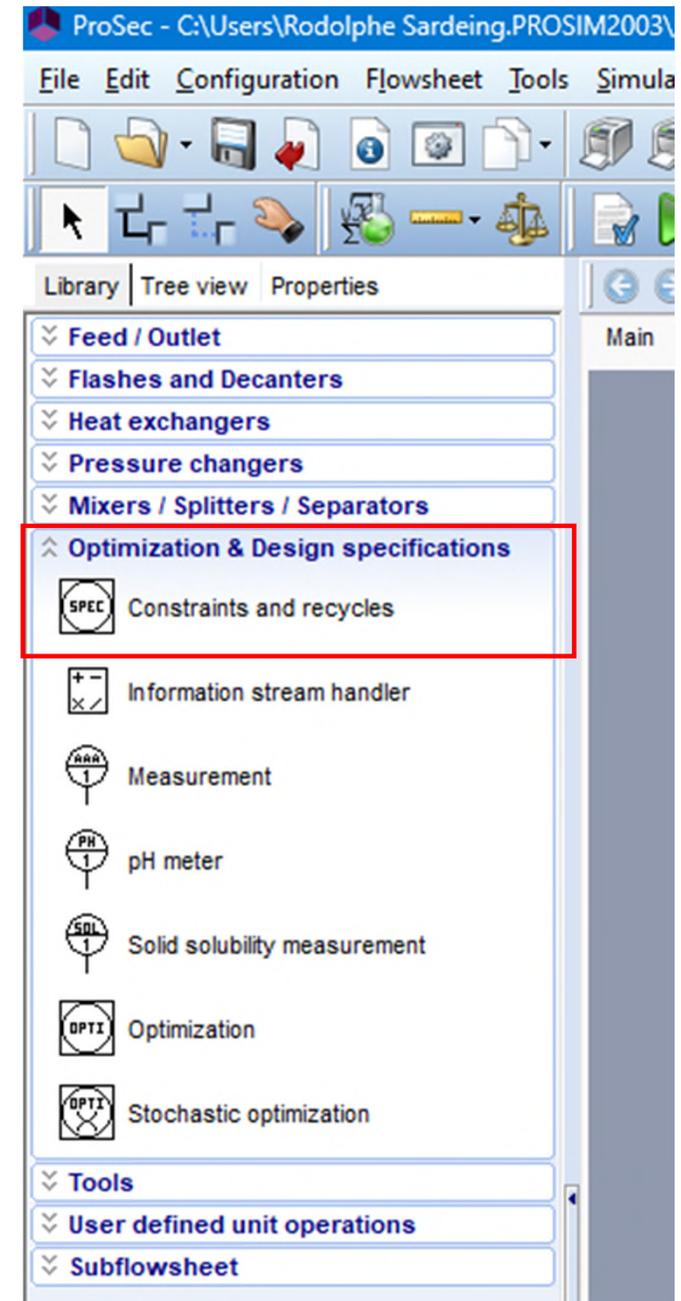


Step 3: Case study

- Conclusions
 - The splitting ratio has an effect on the exchanger heat duty
 - An heat duty of eg. -102500 W can be reached
- The control can now be set up

Step 4: Control

- Add a constraints and recycles module

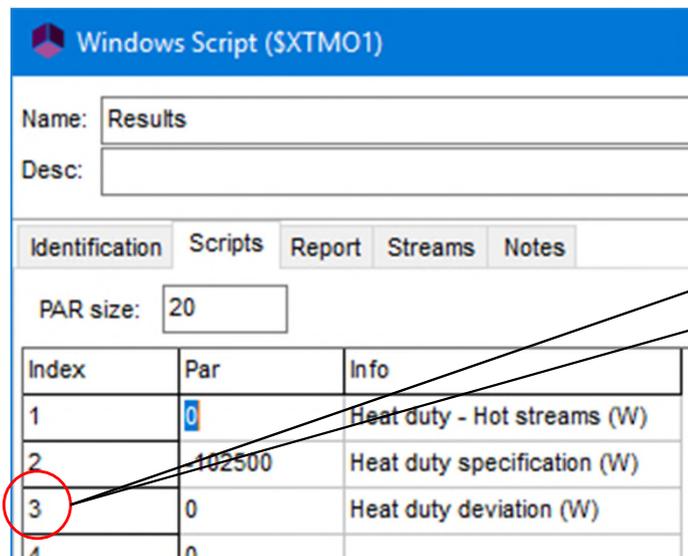


Step 4: Control

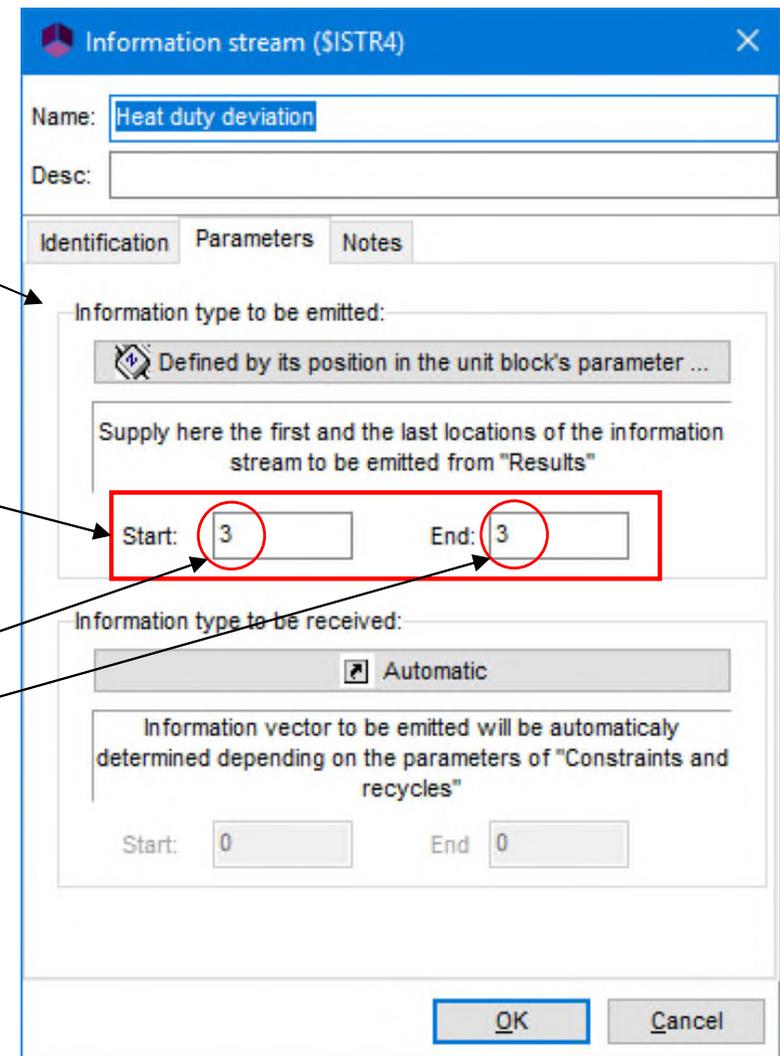
- Use an information stream to connect the “Results” windows script and the constraints & recycles unit operations.
- Enter the parameters in this information stream. Feel free to change the default name.

Information sent by the windows script module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the deviation in the windows script module



Index	Par	Info
1	0	Heat duty - Hot streams (W)
2	102500	Heat duty specification (W)
3	0	Heat duty deviation (W)
4	0	



Information stream (\$ISTR4)

Name: Heat duty deviation

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter ...

Supply here the first and the last locations of the information stream to be emitted from "Results"

Start: 3 End: 3

Information type to be received:

Automatic

Information vector to be emitted will be automatically determined depending on the parameters of "Constraints and recycles"

Start: 0 End: 0

OK Cancel

Step 4: Control

- Enter the parameters in this information stream. Feel free to change the default name.

Information received by the constraints & recycles module, keep the default “Automatic” selection.

Information stream (\$ISTR4)

Name: Heat duty deviation

Desc:

Identification Parameters Notes

Information type to be emitted:

Defined by its position in the unit block's parameter ...

Supply here the first and the last locations of the information stream to be emitted from "Results"

Start: 3 End: 3

Information type to be received:

Automatic

Information vector to be emitted will be automatically determined depending on the parameters of "Constraints and recycles"

Start: 0 End: 0

OK Cancel

Step 4: Control

- Use an information stream to connect the constraints & recycles and the “Data” windows script unit operations.
- Enter the parameters in this information stream. Feel free to change the default name.

Information emitted by the constraints & recycles module, keep the default “Automatic” selection.

Information stream (\$ISTR3)

Name:

Desc:

Identification Parameters Notes

Information type to be emitted:

Information vector to be emitted will be automatically determined depending on the parameters of "Constraints and recycles"

Start: End:

Information type to be received:

Supply here the first and the last locations of the information stream to be received in "Data"

Start: End:

OK Cancel

Step 4: Control

- Enter the parameters in this information stream. Feel free to change the default name.

Information received by the windows script module. Select the option “Defined by its position in the unit block’s parameter zone”.

Position of the splitting ratio in the windows script module

Index	Par	Info
1	10	Splitting ratio (%)
2	0	

Information stream (\$ISTR3)

Name:

Desc:

Identification Parameters Notes

Information type to be emitted:

Automatic

Information vector to be emitted will be automatically determined depending on the parameters of "Constraints and recycles"

Start: End:

Information type to be received:

Defined by its position in the unit block’s parameter ...

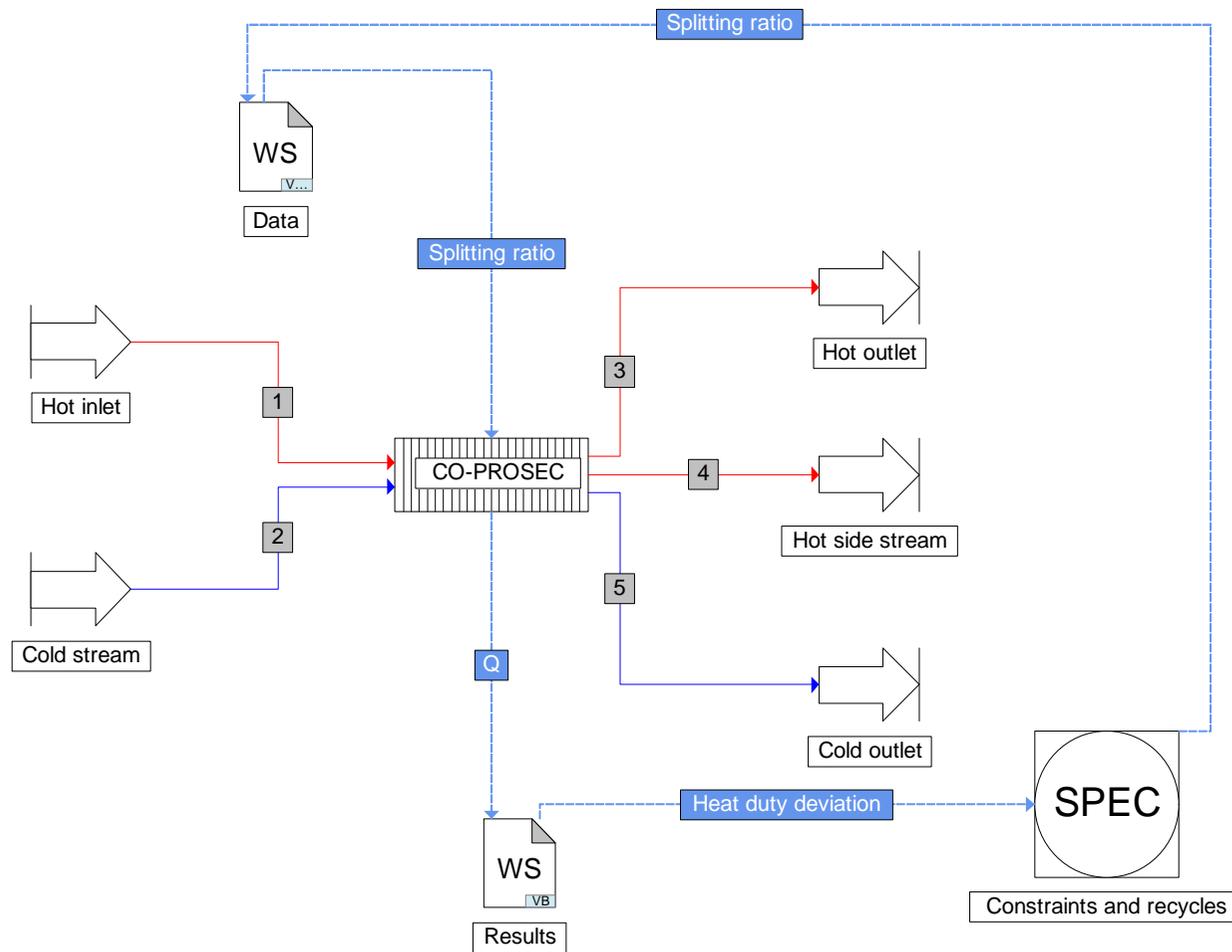
Supply here the first and the last locations of the information stream to be received in "Data"

Start: End:

OK Cancel

Step 4: Control

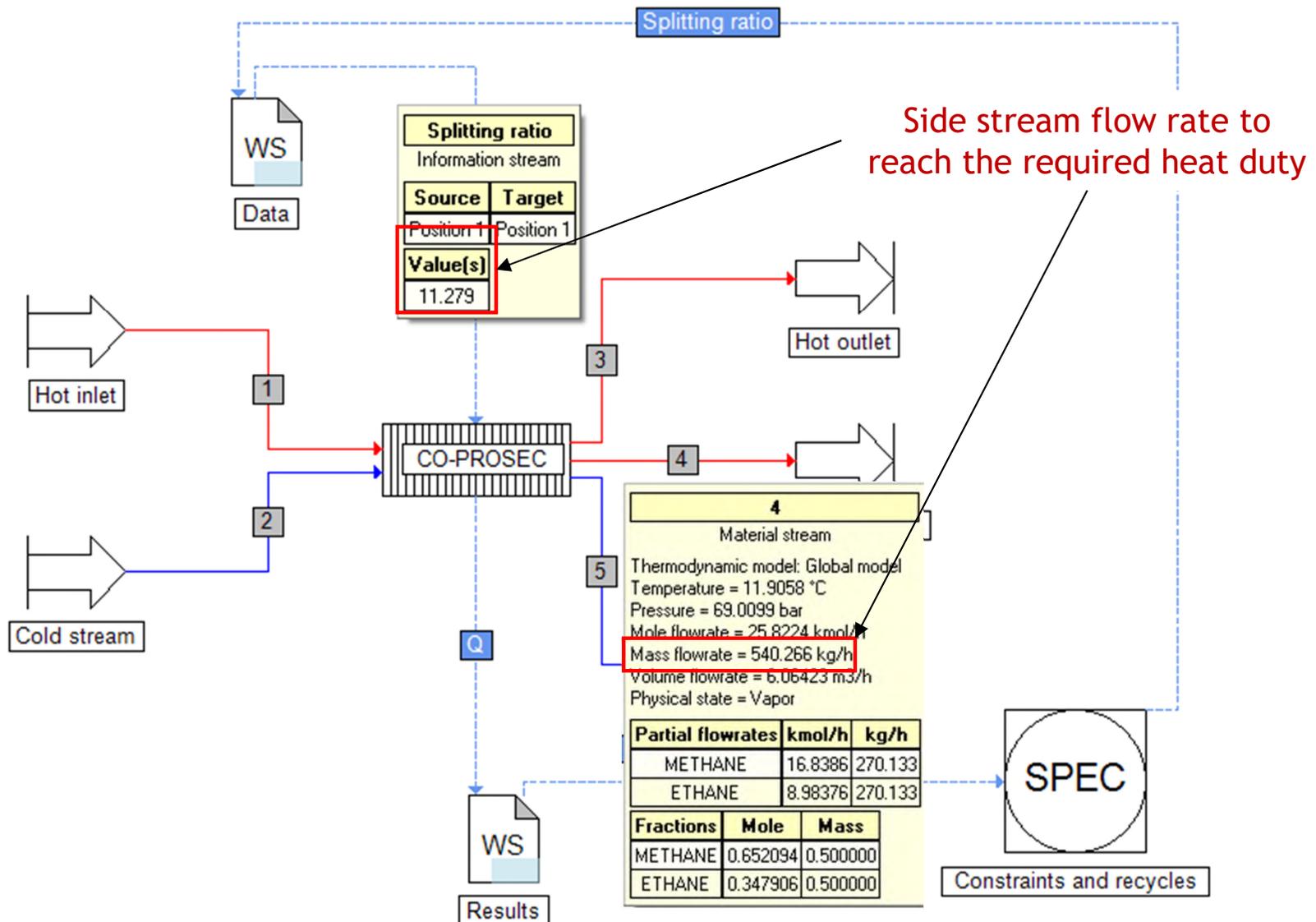
- Flowsheet at this step



- Run the simulation

Step 4: Control

- Results





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