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# LIMN 2 Day Beginners Training – General

R Jermyn



- The primary purpose of the 2 day beginner course is to develop the LIMN skills of first time users.
- From attending the course the attendee will:
  - Know where to find help using the LIMN manuals.
  - Be able to draw LIMN flowsheets.
  - Be able to modify LIMN flowsheets to make them visually appealing.
  - Be able to create their own unit icons to customize their flowsheets.
  - Have an understanding of the different LIMN wizards.
  - Have completed an example using the 1D\_Comminution Wizard.
  - Have completed an example using the Size by Species Wizard.
  - Be able to use the scenarios sheet for options analysis.
  - Have created a user defined wizard and a user defined model.
- Following the course the attendee will be asked to complete 2 worked examples. The examples will be assessed to ensure that the attendee has developed the required LIMN skills, at no additional cost.



- Day 1:
  1. Brief overview of LIMN manuals and content.
  2. LIMN Draw:
    - Adding unit operations; streams; unit labels; stream labels; text box unit icons.
    - Useful tips for drawing flowsheets.
    - Changing the appearance of unit operations; streams, labels. Creating unit icons.
    - Examples 1, 2, 3 and 4.
- Day 2:
  1. LIMN Wizards: overview of the different wizards.
  2. Example 6 using text box unit icons.
  3. Example 7 using constraints controllers.
  4. Example 8 using Choice Wizard
  5. Example 9 using the PFD version of LIMN:
  6. Creating User defined wizards and user defined models.
  7. Other useful LIMN tools and information.



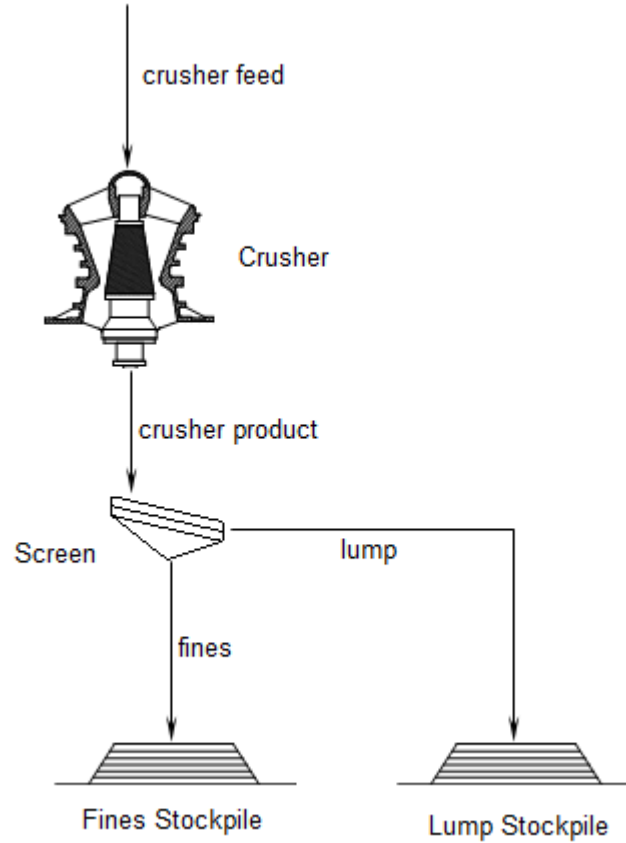
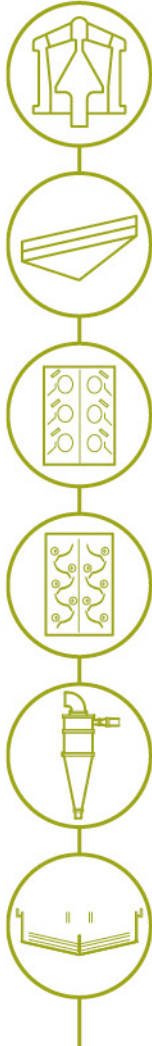
# Time Keeping



07:30 – 08:00	Coffee, emails and setting up
08:00 – 09:00	Session 1
09:00 – 09:15	Email and/or coffee break
09:15 – 10:15	Session 2
10:15 – 10:30	Email and/or coffee break
10:30 – 12:00	Session 3
12:00 – 13:00	LUNCH
13:00 – 14:00	Session 4
14:00 – 14:15	Email and/or coffee break
14:15 – 15:15	Session 5
15:15 – 15:30	Email and/or coffee break
15:30 – 16:00	Review and wrap up of the day

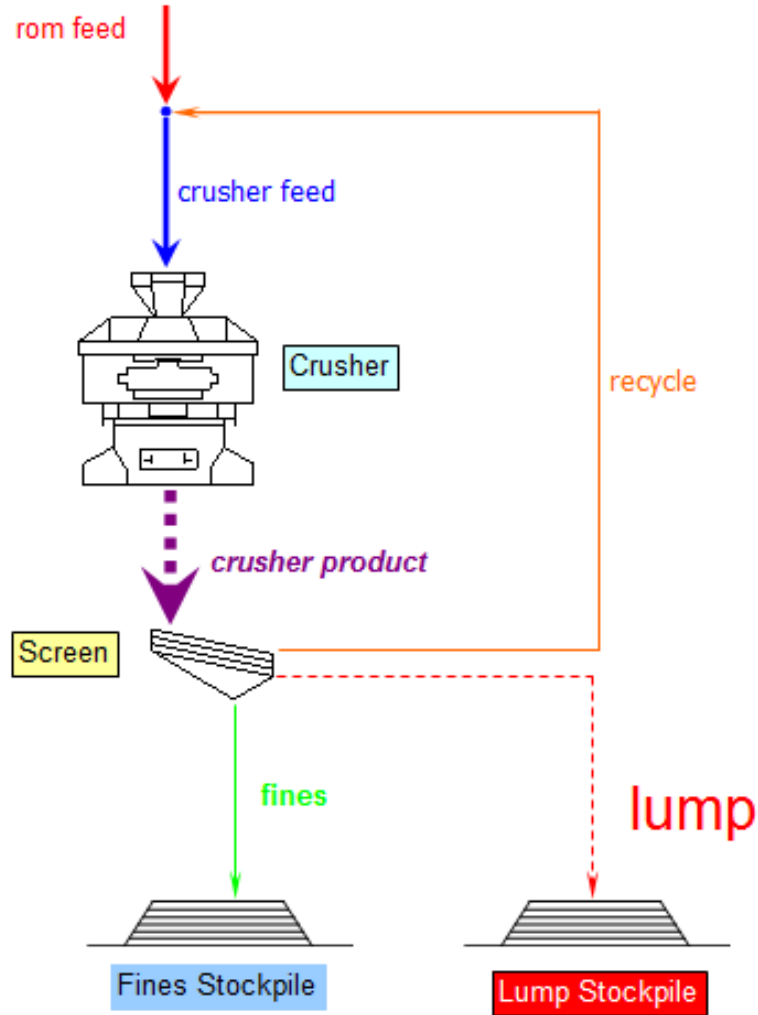
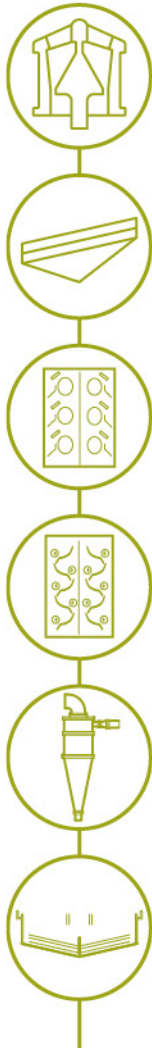


# Example 1



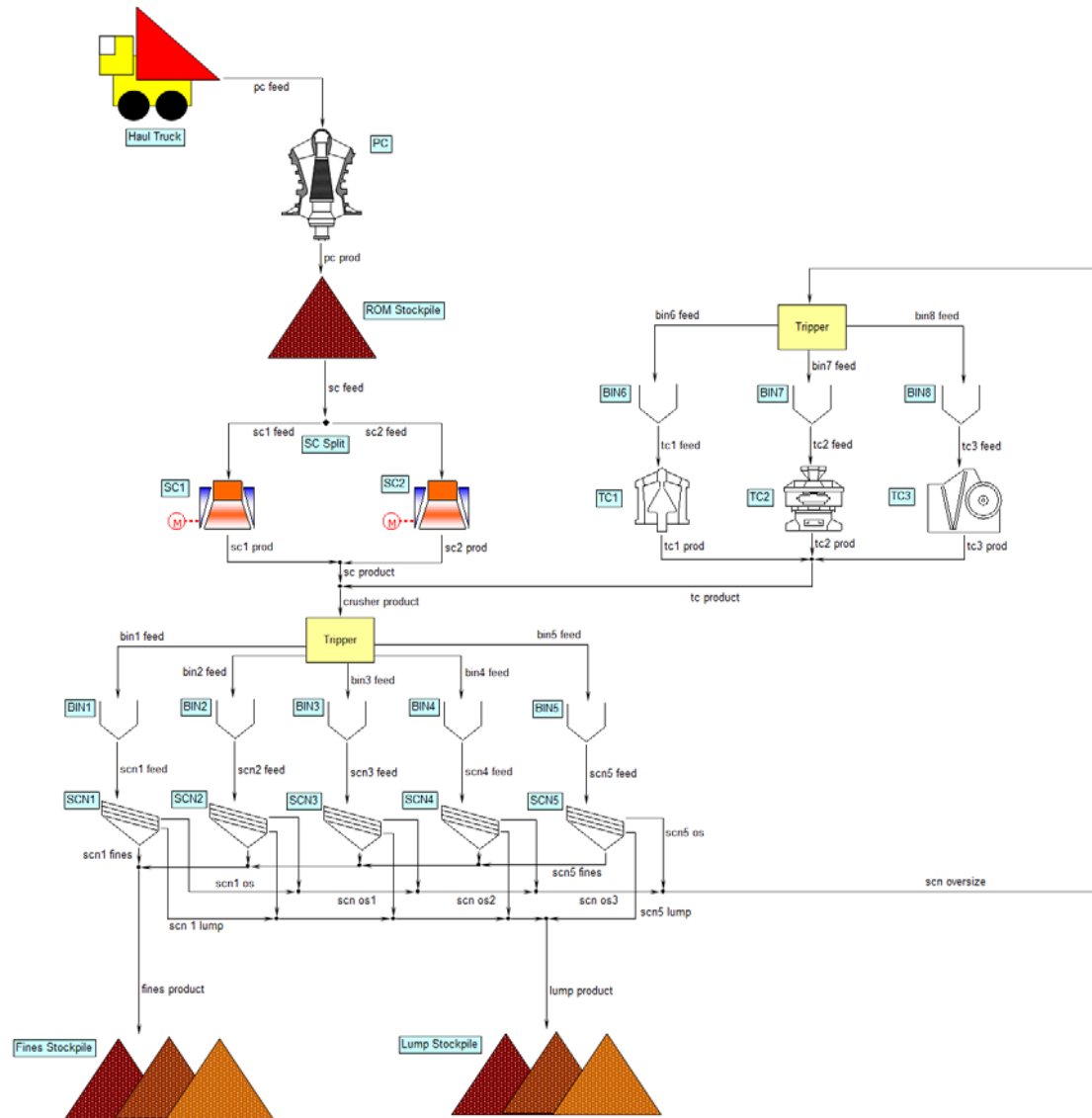
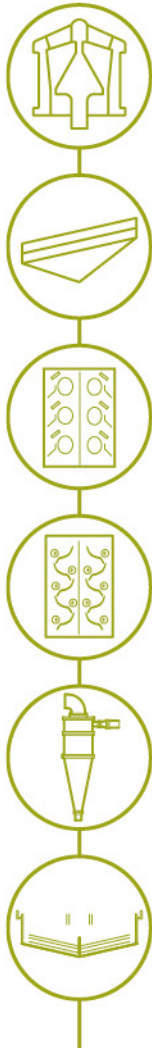


# Example 2





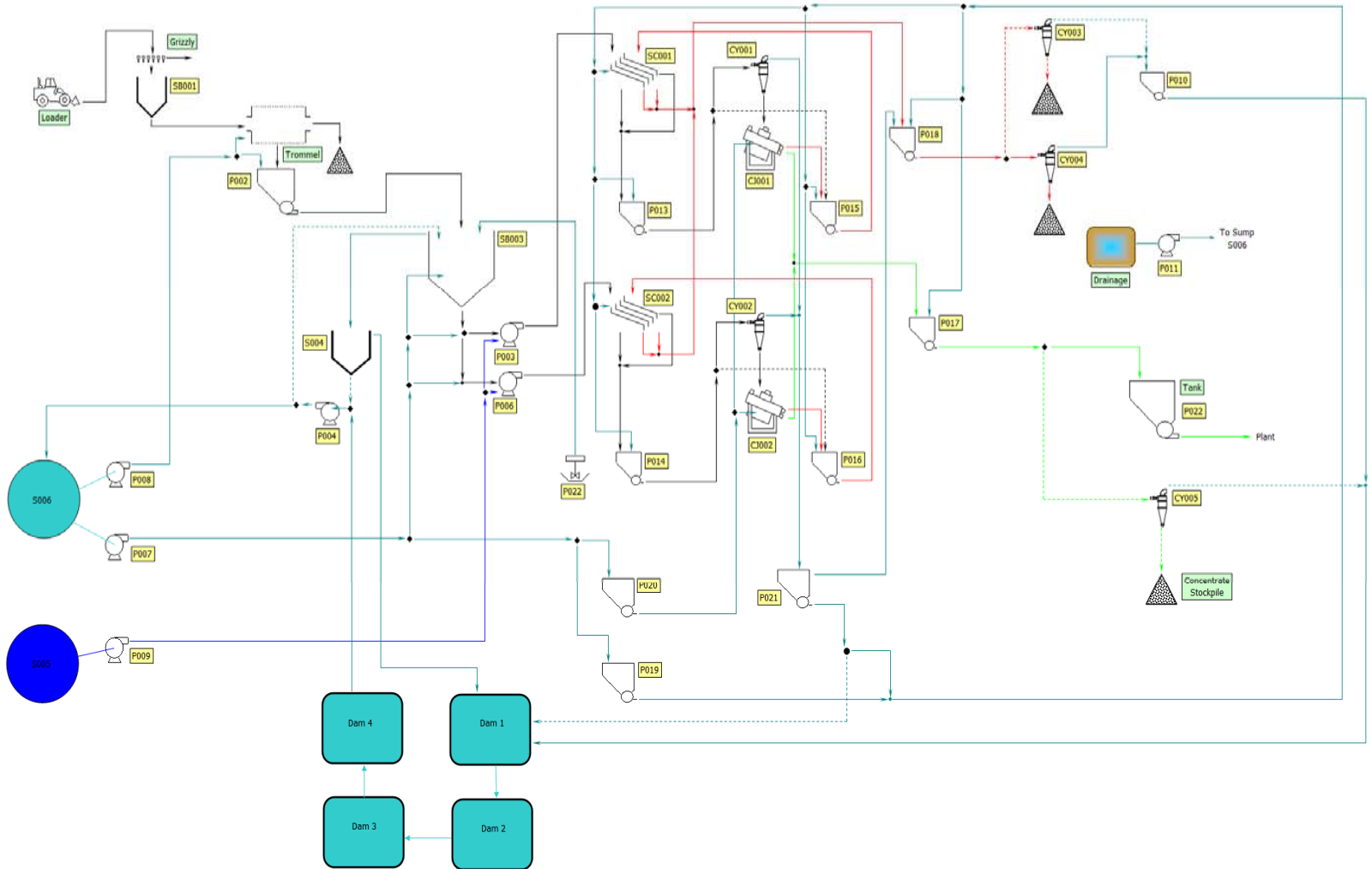
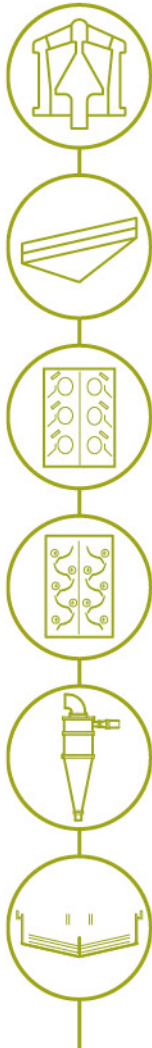
# Example 3





# Example 4

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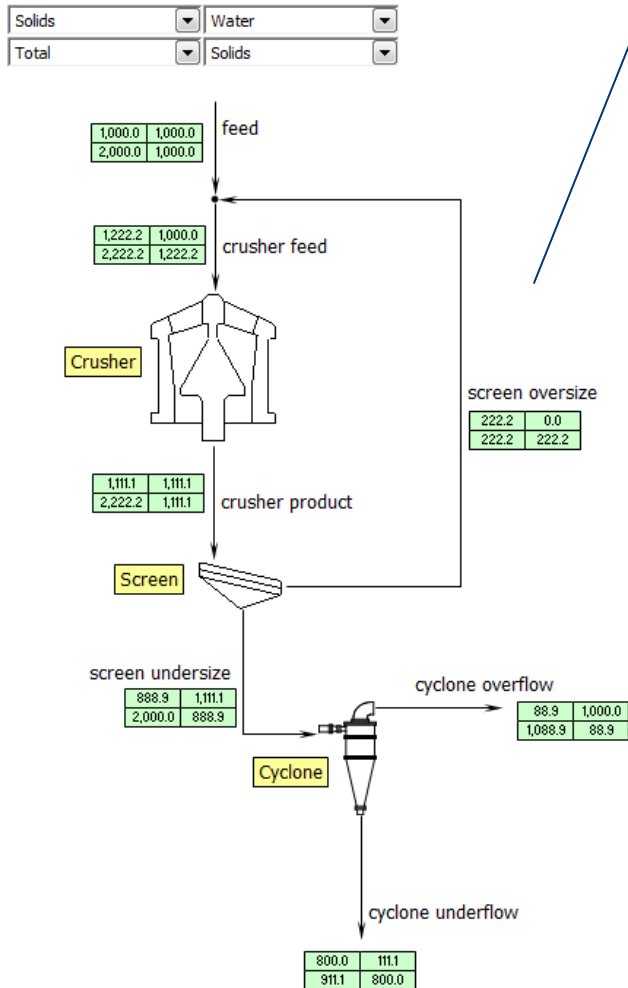






# Example 5

Repeated with each of these wizards.



Limn Wizards

Limn Data Structure Wizards

- 1D\_Comminution
- General(SG x Size)
- Size by Species

Select a Previously Used Wizard Location...

Browse for more Limn Wizards...

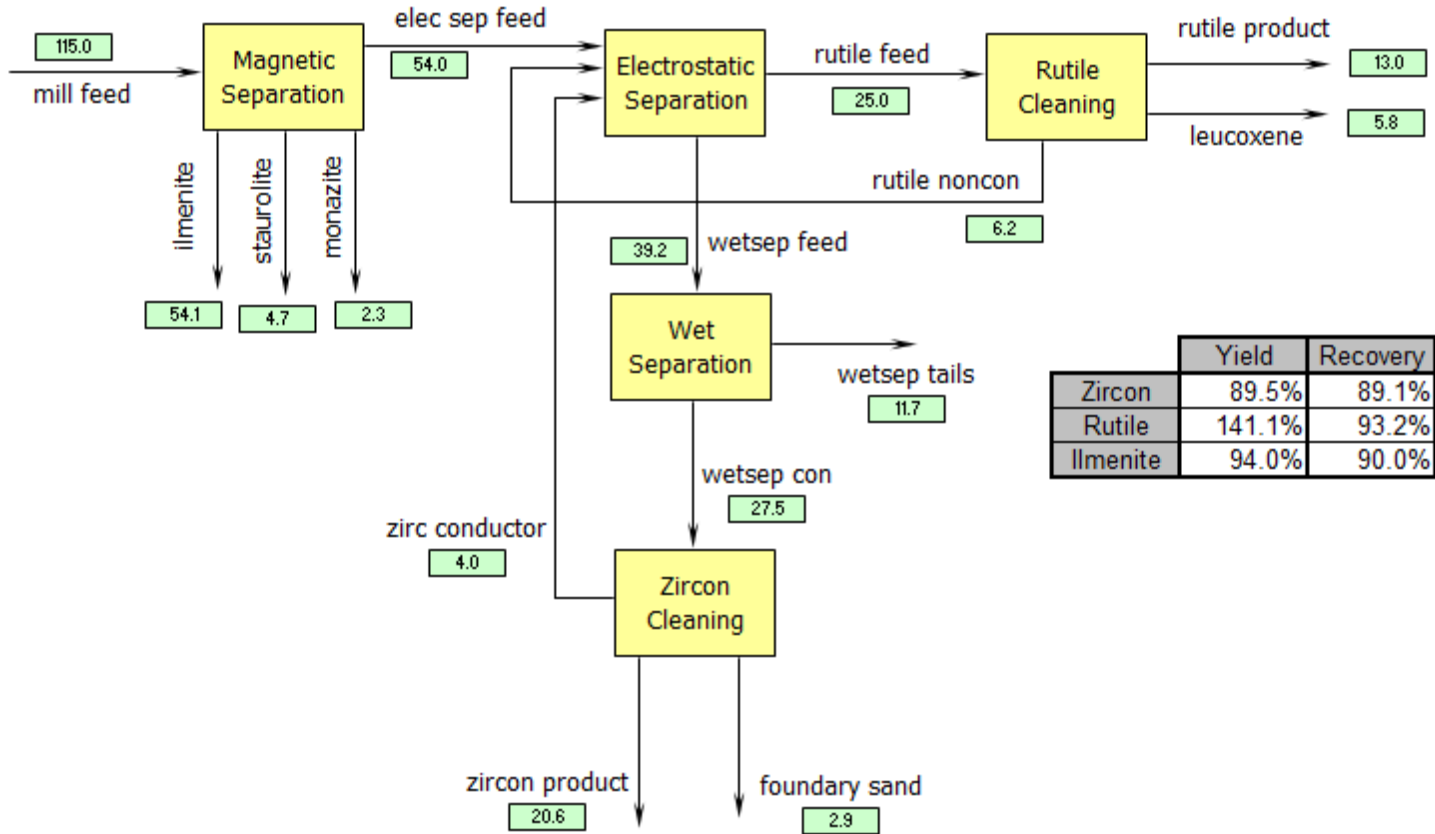
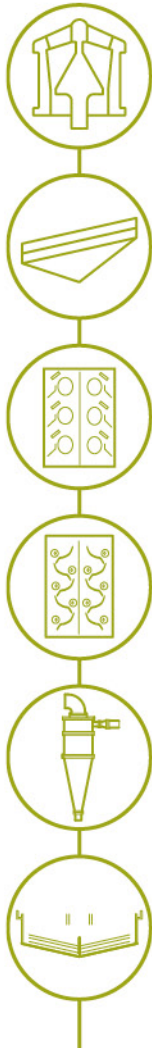
Other Useful Limn Related Functions...

Wizard Library Version 1.59

Cancel



# Example 6



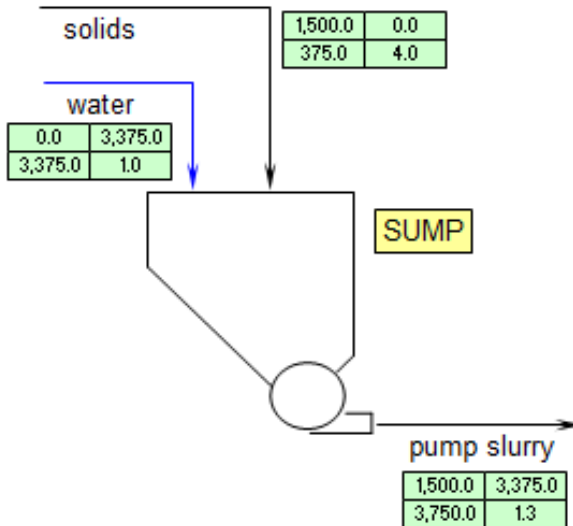
	Yield	Recovery
Zircon	89.5%	89.1%
Rutile	141.1%	93.2%
Ilmenite	94.0%	90.0%



# Example 7



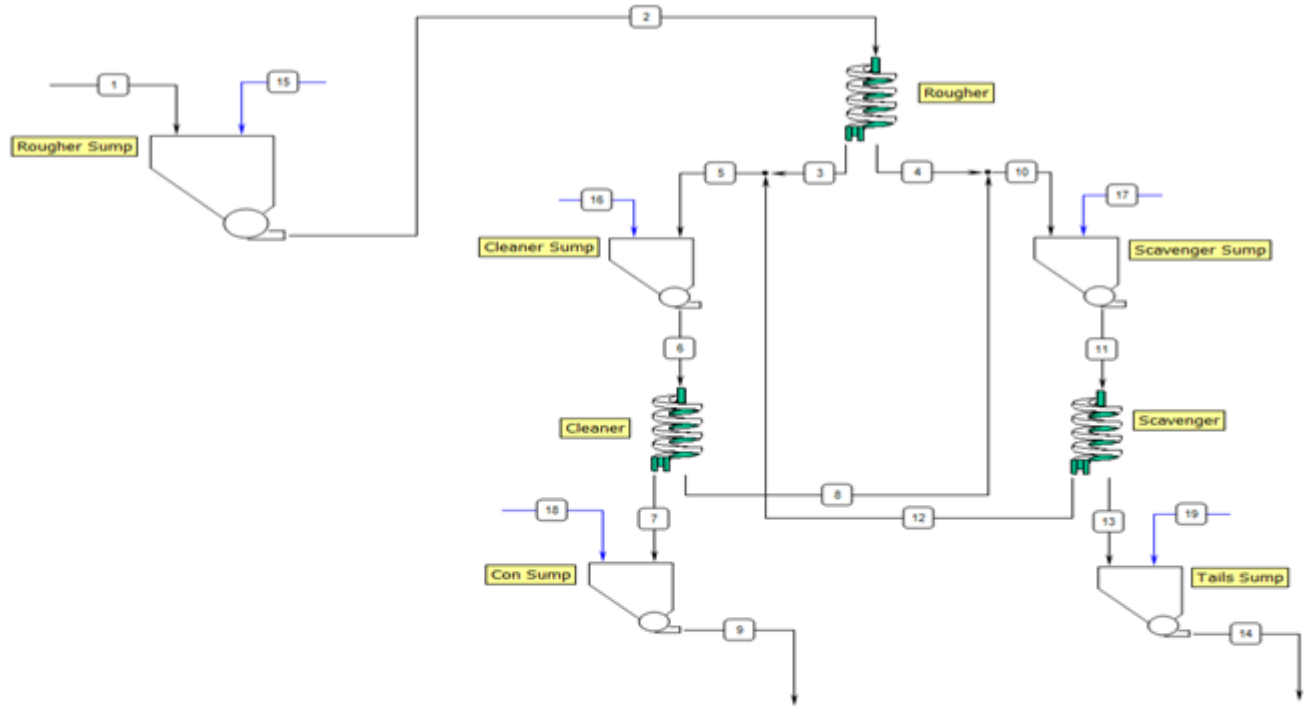
Solids t/h	▼	Water t/h	▼
Volume m3/h	▼	Pulp SG	▼



<b>Density</b>	
Change this Variable (Output) to make this Value (Measurement) equal the required (Setpoint)	3,375.00 1.30
Keep Output between Maximum of and a Minimum of	10,000.00 0.00
Controller K (gain)	-1,000.00
Error <sub>t-1</sub>	0.00
Control Enabled	<input checked="" type="checkbox"/>
Iterations Between Control Actions	1
Start Control at Iteration	1



# Example 9: PFD Example



Stream Data Display Options...

STREAM ID:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<b>STREAM DATA</b>																			
Heavy Mineral	20.0	20.0	16.0	4.0	22.9	22.9	18.3	4.6	18.3	8.6	8.6	6.9	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Sand	30.0	30.0	6.0	24.0	12.9	12.9	2.6	10.3	2.6	34.3	34.3	6.9	27.4	27.4	0.0	0.0	0.0	0.0	0.0
Water	0.0	100.0	2.0	98.0	5.4	75.4	1.5	73.9	46.5	171.9	171.9	3.4	168.5	168.5	100.0	70.0	0.0	45.0	0.0
Solids [t/h]	50.0	50.0	22.0	28.0	35.7	35.7	20.9	14.9	20.9	42.9	42.9	13.7	29.1	29.1	0.0	0.0	0.0	0.0	0.0
Slurry [tm <sup>3</sup> /h]	3.10	1.29	2.95	1.16	2.61	1.30	3.21	1.12	1.30	1.15	1.15	2.24	1.10	1.10	1.00	1.00	1.00	1.00	1.00
Slurry [m <sup>3</sup> /h]	16.1	116.1	8.1	108.3	15.8	85.8	7.0	78.9	52.0	187.2	187.2	7.7	179.8	179.8	100.0	70.0	0.0	45.0	0.0
% HM	40	40	73	14	64	64	88	31	88	20	20	50	6	6	0	0	0	0	0
% Sand	60	60	27	86	36	36	12	69	12	80	80	50	94	94	0	0	0	0	0
<b>STREAM NAME</b>	wfsep feed	rougher feed	rougher con	rougher tail	clr sump feed	cleaner feed	cleaner con	cleaner tail	final con	scar sump feed	scavenger feed	scavenger con	scavenger tail	final tails	rs water	cls water	ss water	cos water	fs water