

Use the Divider to Setup Essential Process Configurations

In ProTreat®, it is possible to split the flow of a stream into multiple smaller streams. A single incoming stream may be split up into 2, 3 or 4 outgoing streams. All the outgoing streams from a divider will have the same composition and properties. A divider may be used to represent one of many situations such as – bleeding/purging streams, bypass lines, splitting flows to feed multiple trains, etc. Dividers may be specified in one of three ways; as a percent of the total incoming flow, an actual flowrate, or a component flow. The component flow will take the specified flowrate of the desired component and adjust the flows of the other components such that the stream composition does not change. In all three cases, one stream will always be required to be “free” (or left unspecified) to avoid an over specification of the outlets.

Below are some application examples of how the divider block in ProTreat® may be used (see encircled region) –

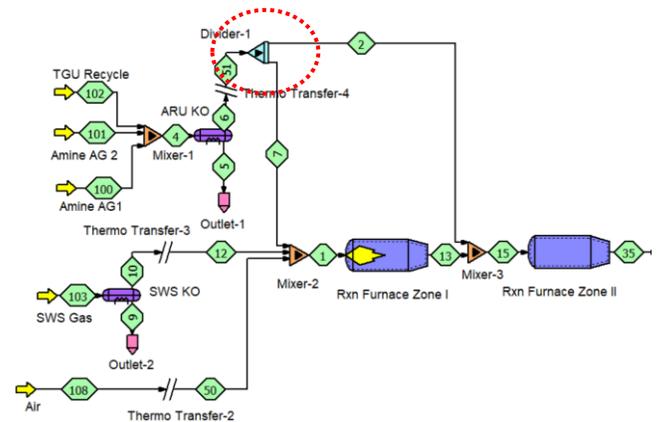


Figure 3 – Splitting acid gas flow for a 2-zone furnace

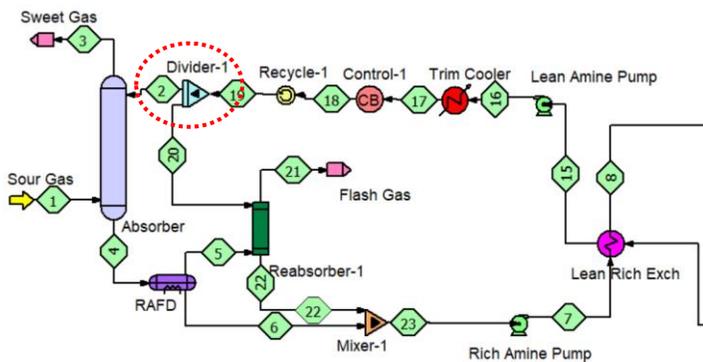


Figure 1 – Using a divider to split a small quantity of lean amine flow for the flash gas reabsorber

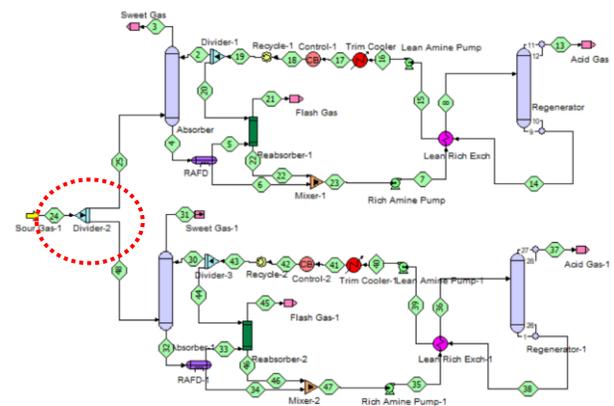


Figure 4 – Splitting flow to feed multiple trains

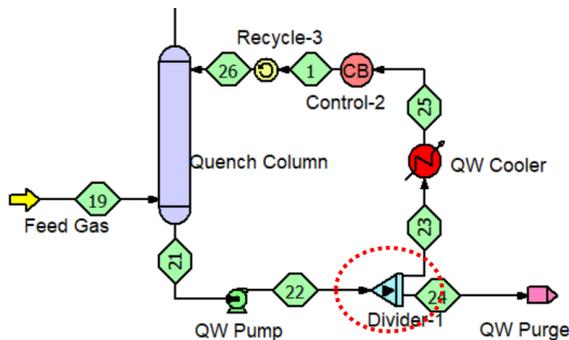


Figure 2 – Purging quench water in quench column loop

PROTIP: Usually it is safest to specify the flow split in a divider as a percentage of the inlet flow. However, in some circumstances, an actual flow rate specification can be made quite safely regardless of your knowledge of the total feed flow. For example, if your flowsheet contains a flash gas reabsorber, as in figure 1, the solvent flow rate to this unit will always be a small fraction of the total lean solvent flow to the sour gas contactor(s). In that case, the actual flow to the reabsorber can be safely specified; however, to specify the actual flow to the contactor(s) and allow the flow to the reabsorber to float would be inviting trouble.

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