

A new solution to old white liquor plant problems

Presented by:

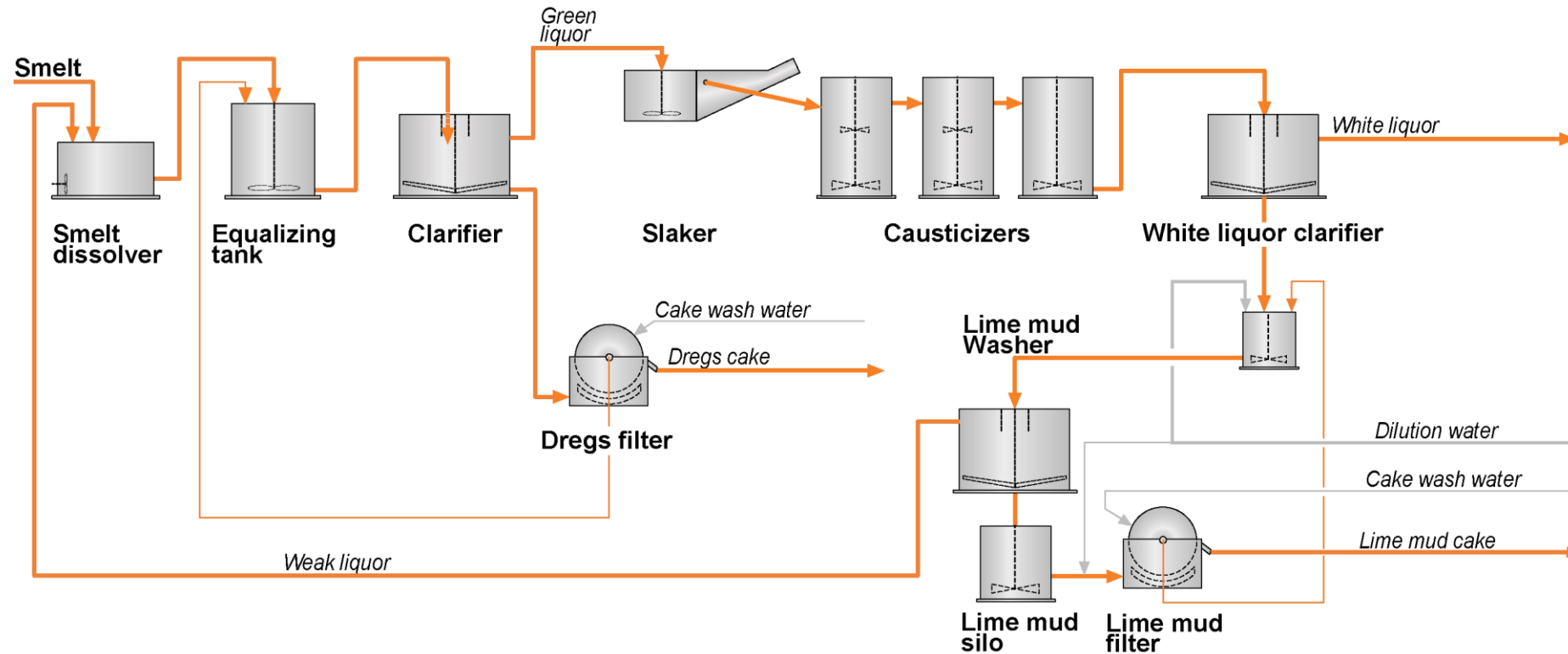
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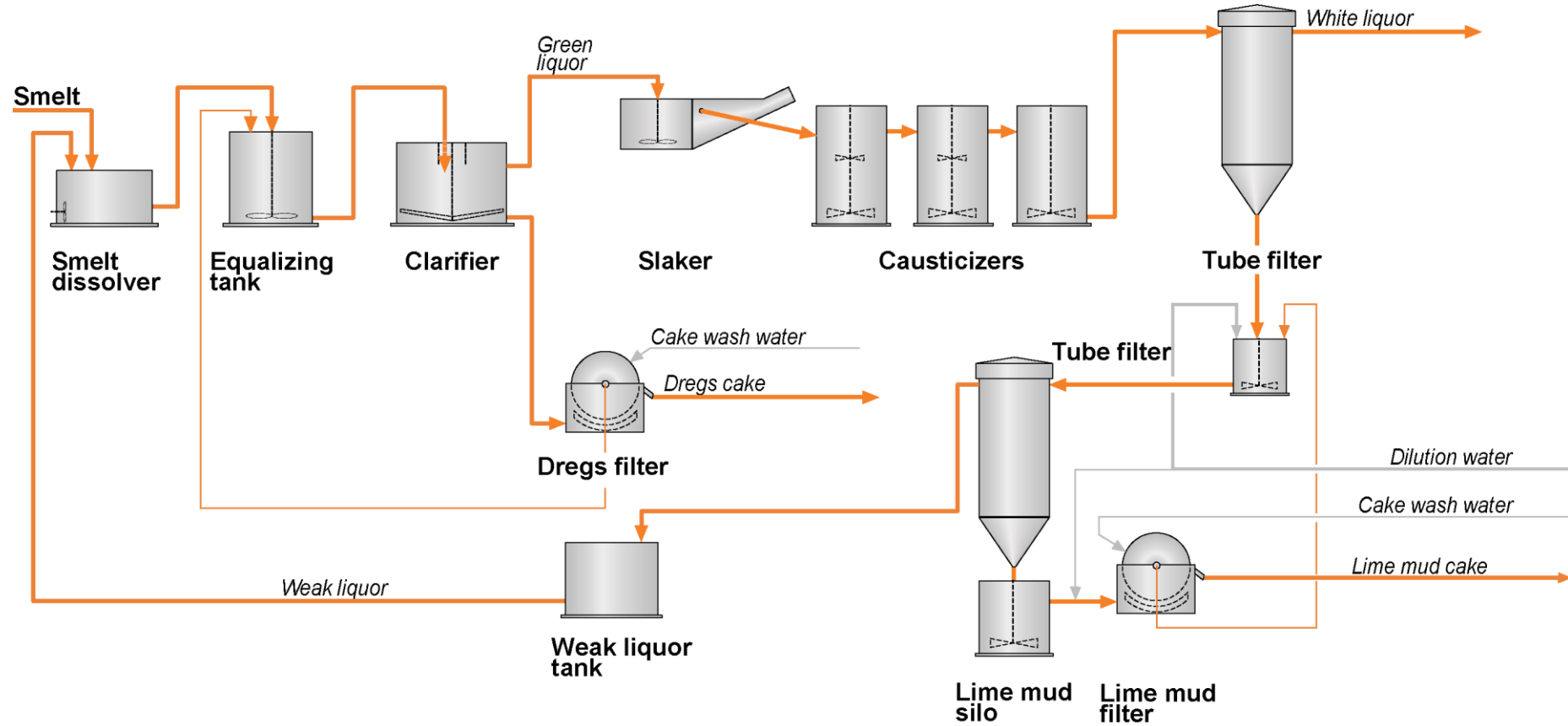
Sedimentation White Liquor Production

Clarifier system



White Liquor Filtration

Tube filter system

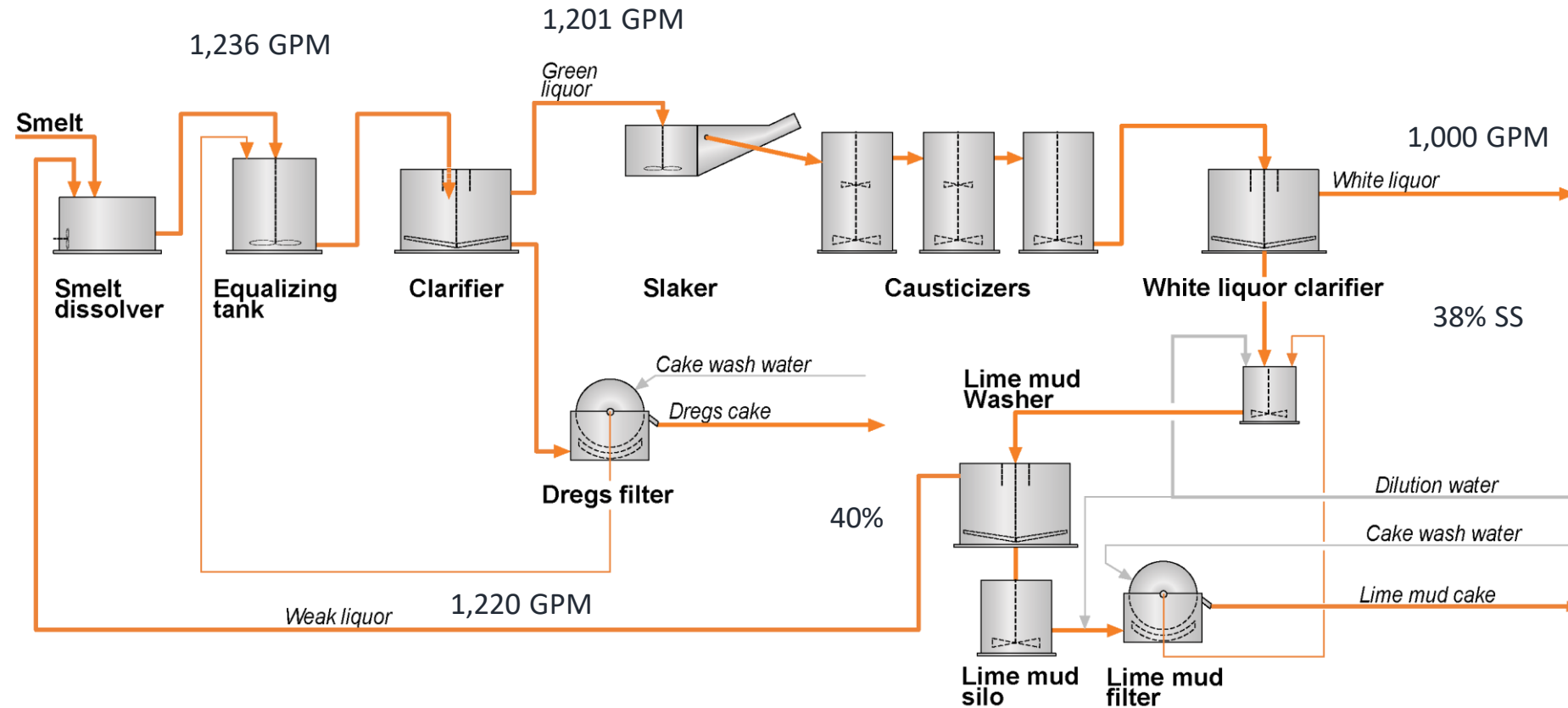


Classic White Liquor Plant Problems

- Dirty green liquor
- Short retention time in the Slaker
- High rise rate in the slaker classifier
- Insufficient retention time in the Causticizers
- Dirty White Liquor / Thin underflow from the White Liquor Clarifier
- Limited Capacity / Thin underflow from the White Liquor Tube Filter
- Excess Weak Wash Production / Thin Underflow from the Mud Washer
- High fuel consumption in the kiln / Rings / TRS excursions

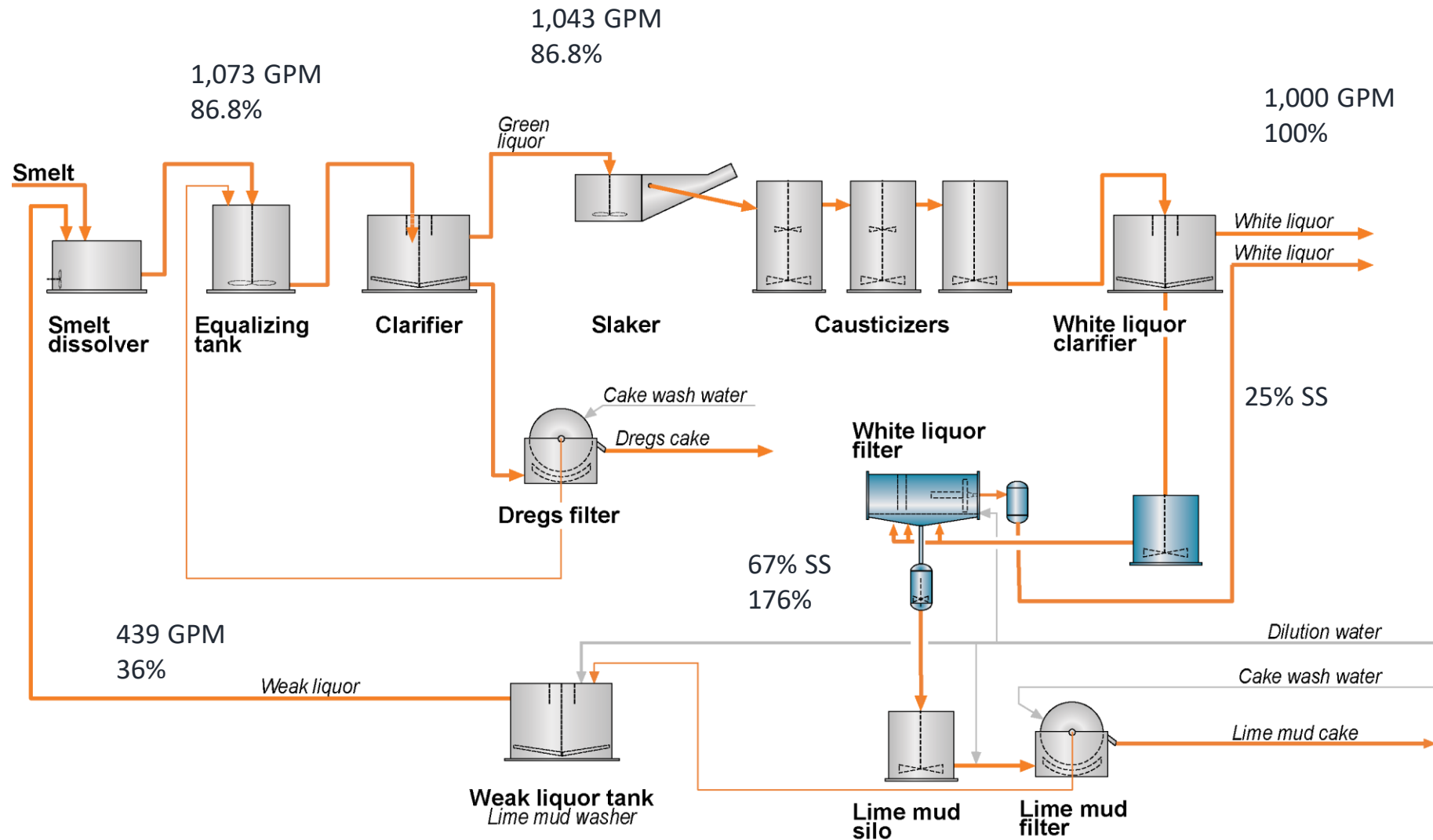
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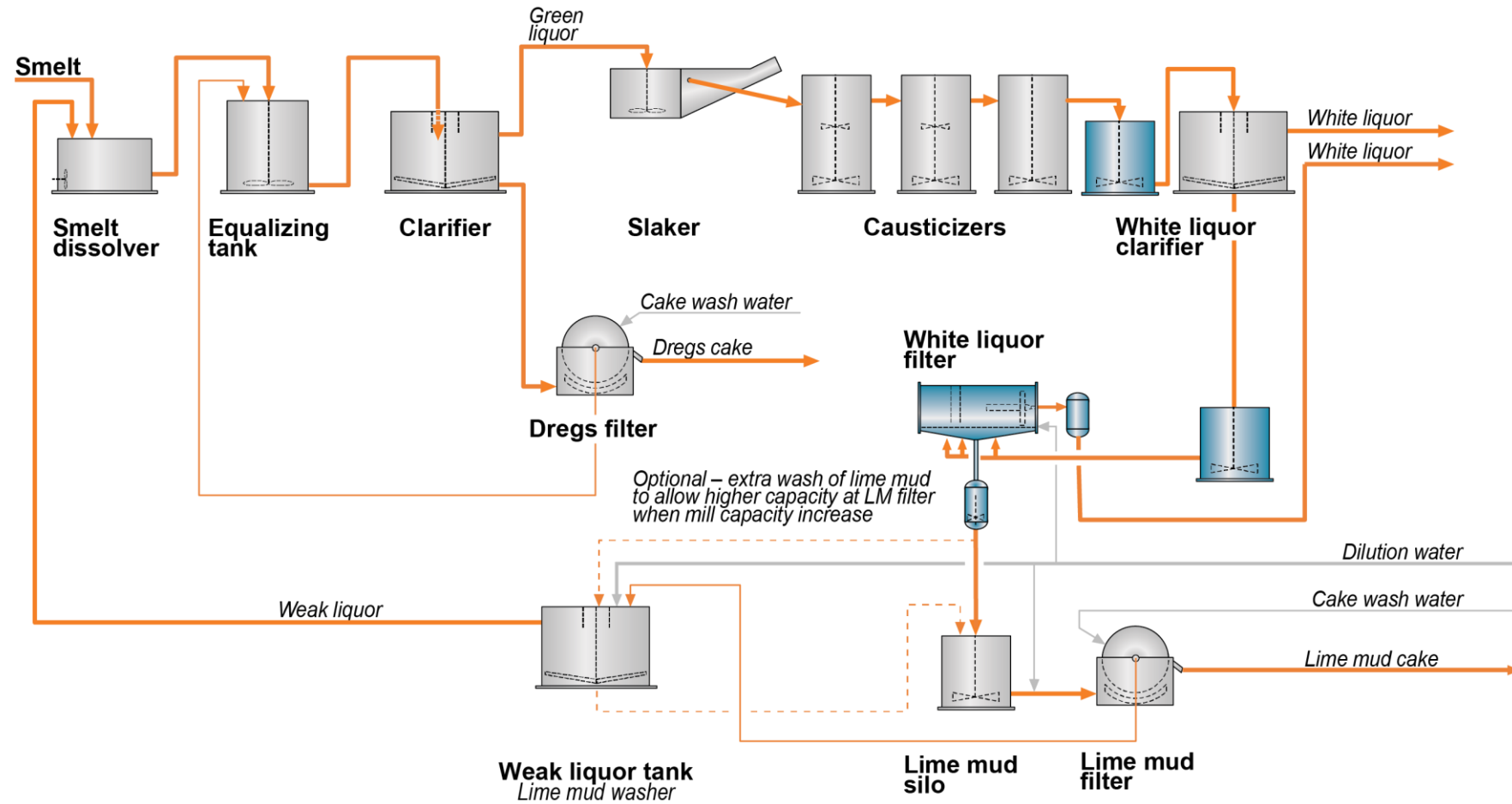
Add an Underflow Filter to a Sedimentation System

A White Liquor Disc Filter in the Mud Washer Position



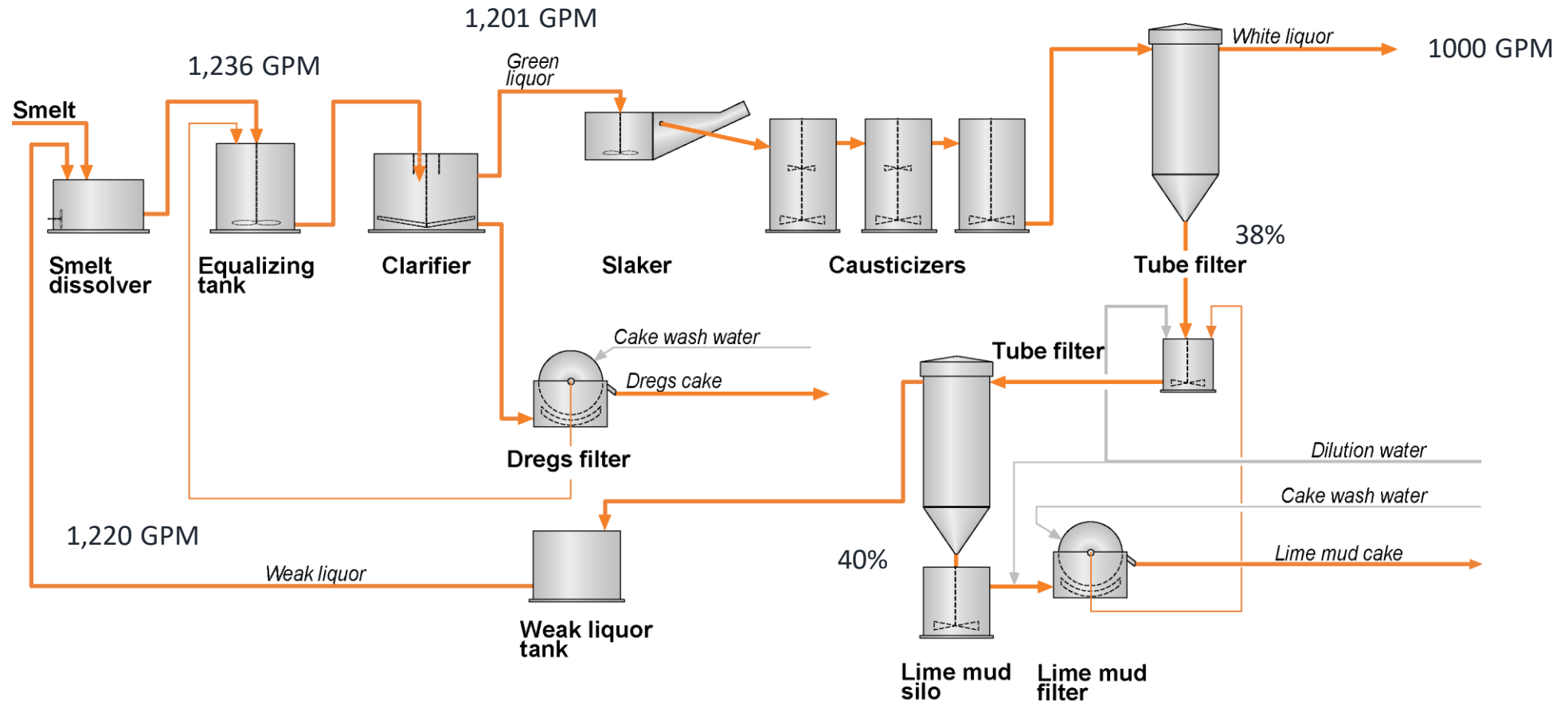
An Underflow Filter in a Sedimentation System

With the Mud Washer in operation



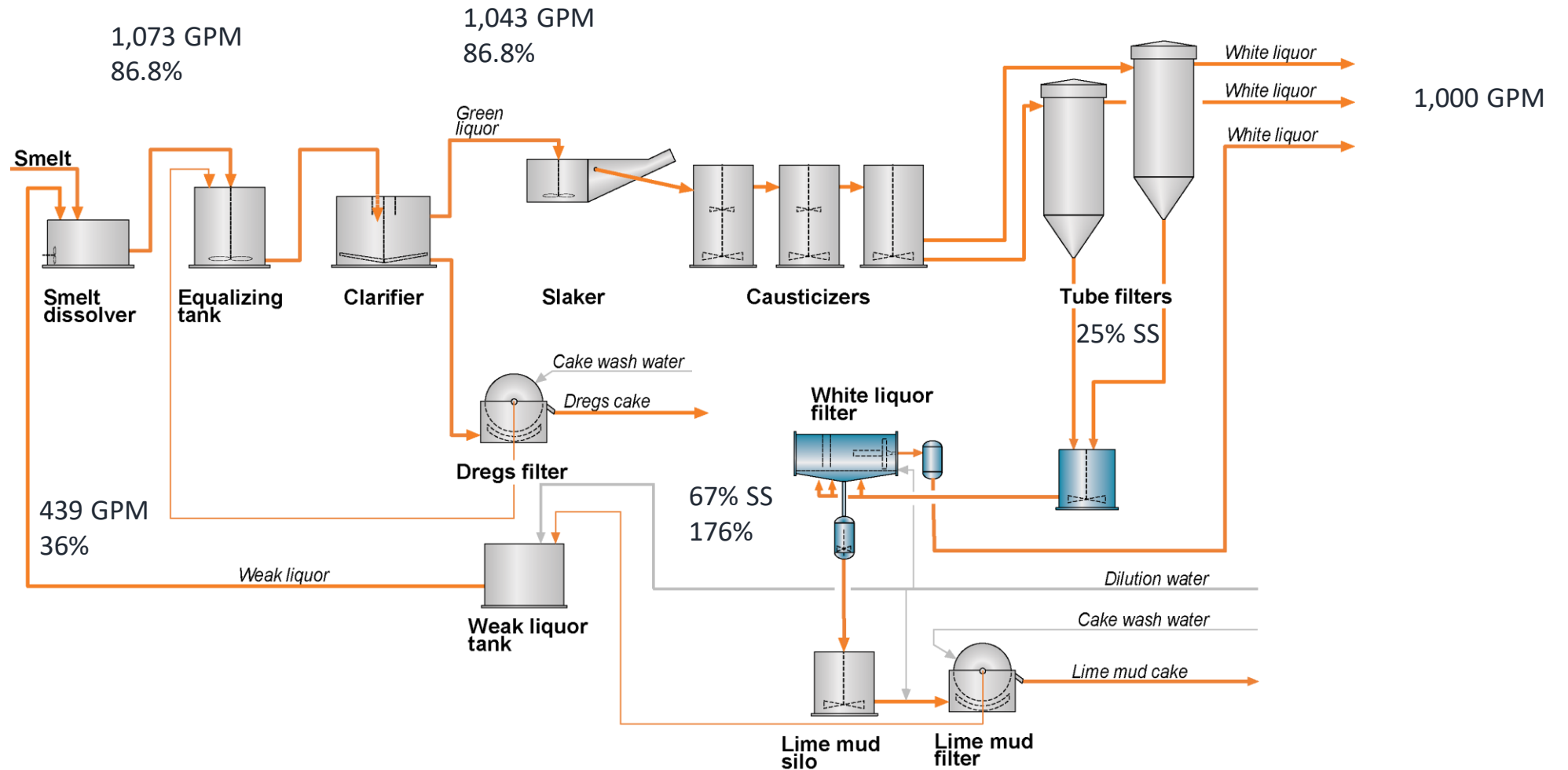
White Liquor Filtration

Tube filter system

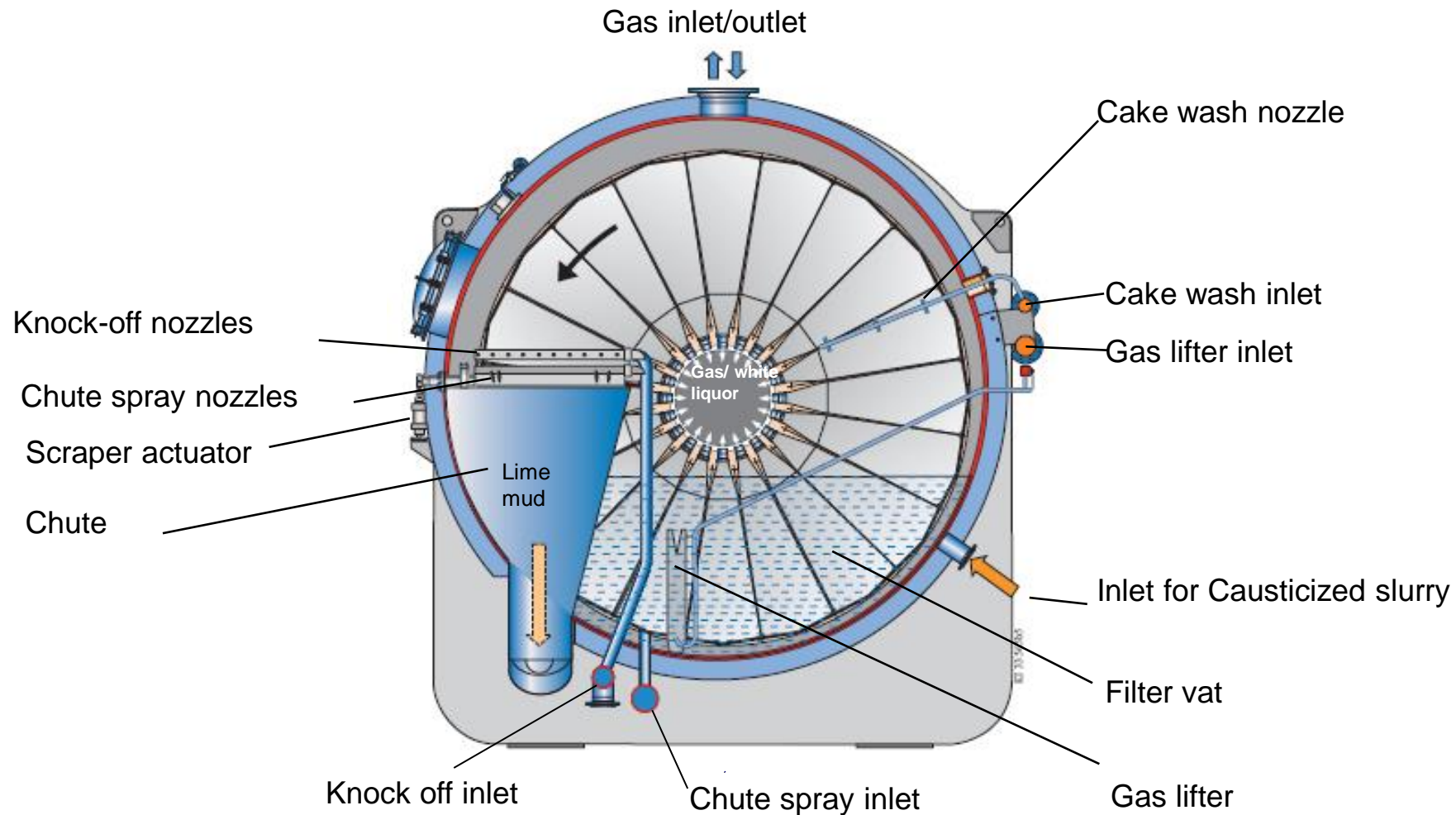


Add an Underflow Filter to a Tube Filter System

A White Liquor Disc Filter after both tube filters in parallel on White Liquor



Inside the Valmet White Liquor Disc Filter



White Liquor Disc Filter in Operation



Benefits of a White Liquor Disc Underflow Filter

- Unloads the green liquor portion of the system
 - Lower rise rate in the Green Liquor Clarifier
 - Greater retention in the slaker bowl
 - Reduced rise rate in the classifier
 - Longer retention in the causticizers
- Improves White Liquor quality while maintaining clarification's process tolerance
- Eliminates the need for a separate mud washing stage / Still need a Weak Wash Tank
- Makes the White Liquor Plant Weak Wash deficient / No Weak Wash overflowing into the sewer
 - Allows greater feed dilution to the lime mud precoat filter
- Improves the water-soluble soda in the feed to the lime mud filter
 - Lower water-soluble soda in the kiln feed
 - Higher lime mud filter discharge solids
 - Ringing less likely
 - TRS emissions lower
 - Can still operate Mud Washer if extremely clean lime mud is desired