



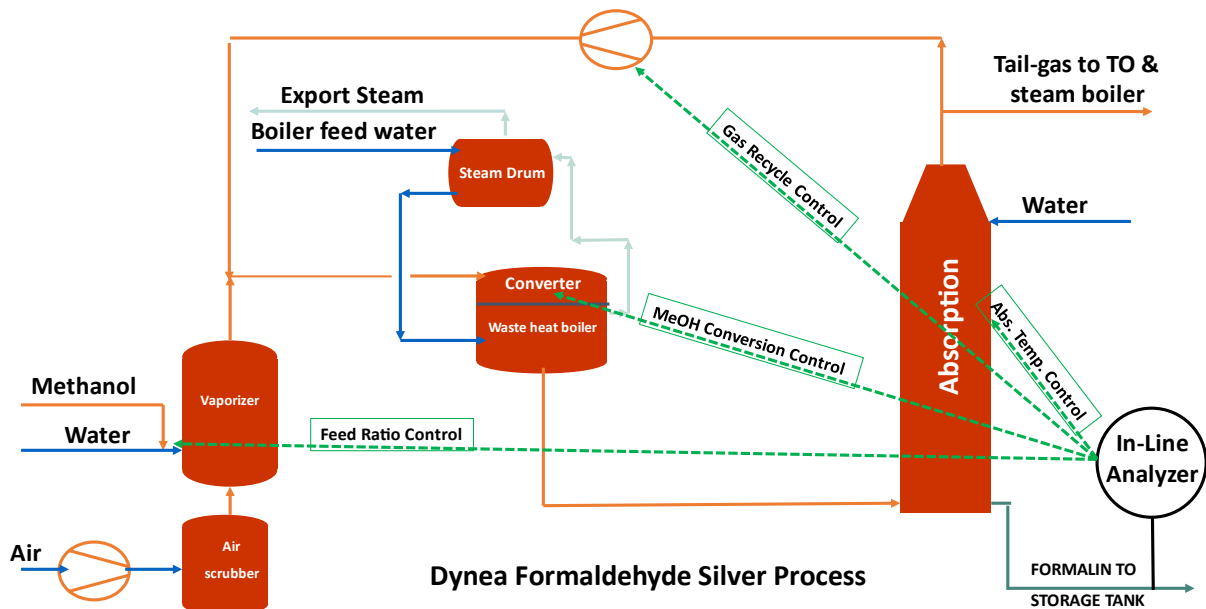
fasil[®] Process Optimized with In-Line Product Analyzer

The silver catalyzed formalin production units licensed under the silver catalyst formaldehyde technology by Dynea (fasil[®]) undergoes continuous improvements, and one of those improvements involves the use of in-line product analyzers to optimize the formalin production by utilize the least amount of methanol while meeting the product specifications like the concentrations of formalin, methanol, and formic acid.

The high-level controlled variables for maintaining an optimized product quality are:

1. Feed ratio (methanol/water)
2. Absorption of formaldehyde, water and methanol
3. Methanol conversion in the reactor
4. Gas recycle

A suitable scope of a specialization project and a Master's thesis would be to find methods for controlling the process to minimize operational costs while keeping the product quality within the specifications. A model for the fasil[®] plant would be required, and shall be developed by the student; A rather simplistic one due to the comprehensiveness a rigorous model will prove to be. Dynea can support with relevant process data and guidance. Decent work from other students has been carried out the recent years regarding the fasil[®] process, which would be invaluable for this project.



Dynea AS is a leader in providing high performance resins, adhesives and hardeners mainly for the wood working industry in Europe. Dynea's focus on efficient operations has created a world leading technology fasil[®] to produce Formaldehyde, an important chemical building block for the world chemical industry, now available for licensing of complete plants. The new opportunities have resulted in an increase in new contracts and projects for the separate business unit Licensing and Projects, Technology Centre.