

MEG Filtration for Commissioning:

Baleen Process Solutions successfully delivers and operates filtration package to treat MEG during platform startup.

BACKGROUND

Monoethylene Glycol (MEG) is commonly injected into wells to inhibit hydrate formation. Replenishing MEG with fresh product and disposal of used MEG during operations is cost prohibitive. As a result, many operators employ on-site filtration systems to treat rich MEG prior to regeneration. While it is common to use platform production equipment for this process, platform startup operations and initial well unloads usually result in abnormally problematic fluids. These fluids often require robust temporary filtration equipment for MEG filtration.

SITUATION

A gas platform operator in the Mediterranean Sea contracted Baleen Process Solutions to provide a temporary system for filtering rich MEG during platform startup operations until the platform's permanent system could be properly commissioned. The goal was to reduce solids in the system ranging from 20,000 to 50,000 ppm down to removing 99% of all solids greater than 5 micron in size. The operator also needed to remove residual oils and dyes present in the MEG. The system would also serve as a backup in the event that the permanent system experienced upsets.



SOLUTION

Baleen Process Solutions worked closely with the operator to engineer a custom-designed system to meet all objectives. The design included a surge vessel equipped with a desander to precipitate out solids prior to subsequent filtration systems. The surge vessel was followed by a series of two layers of solids filtration, first with sock filters followed by pleated filters, and finally bulk media vessels with granular activated carbon.

The Baleen Process Solutions team then coordinated with the platform operations to facilitate the installation and commissioning of the custom-built equipment package. The engineering team managed the design and fabrication of the equipment while providing all necessary documentation for the installation and operation of the package.

A systems integration test of the equipment was performed prior to shipment, accompanied by a joint Baleen-operator team. Baleen also provided personnel to operate the equipment for the first 4 months during platform commissioning, concluding a complete design, build, and operation solution.

RESULTS

The Baleen process allowed for consistent treatment of rich MEG during commissioning operations resulting in:

- TSS levels in fluid reduced from 1.65 to 0.16 mg/L
- Removed dyes and residual oil from MEG

Baleen’s teams were successful in:

- Turnkey design and fabrication of custom, project-specific equipment package
- Seamless shipping and installation of equipment on platform
- Operation of equipment package during platform startup in conjunction with platform commissioning operations
- Continued supply of media to platform, including exportation support

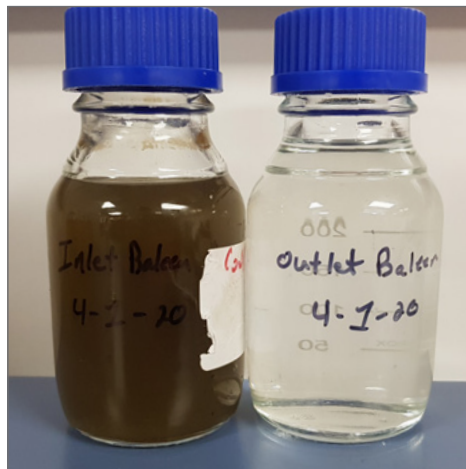


Figure 1. System inlet (left) and outlet (right) samples

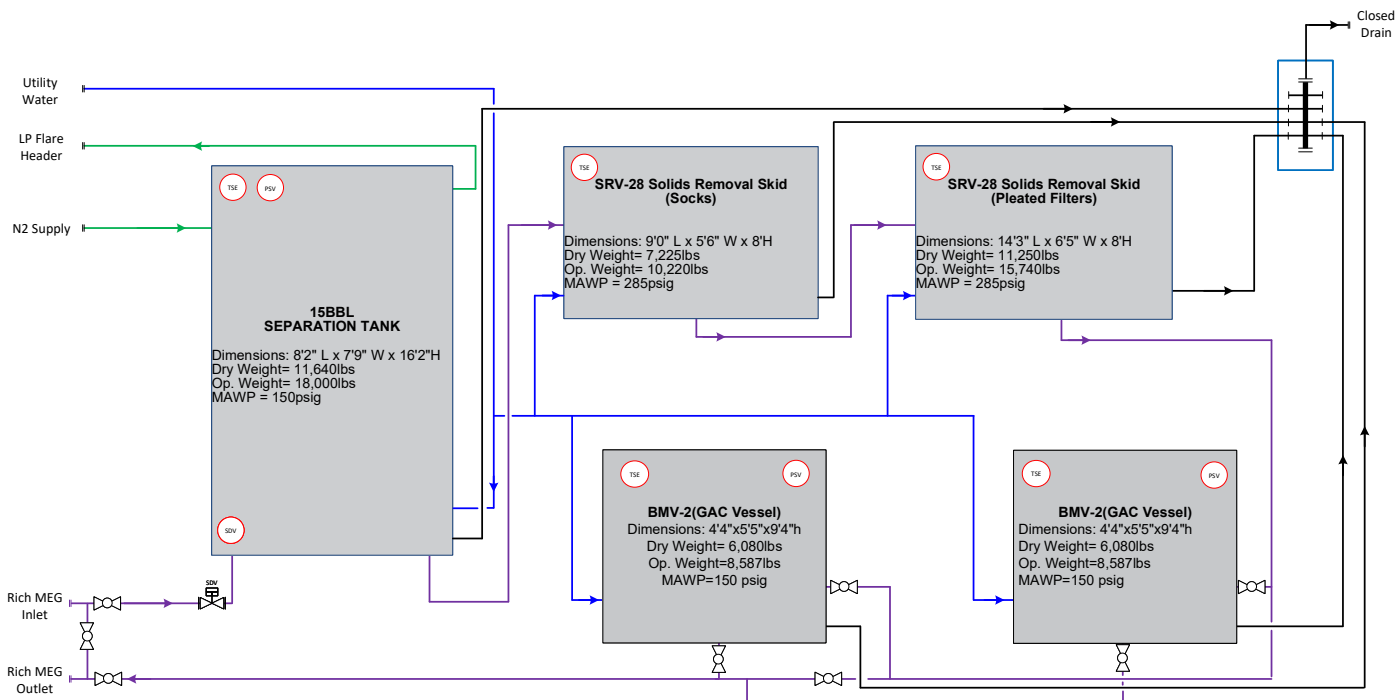


Figure 2. MEG Filtration PFD

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