

## PALL LG COALESCING FILTER RECOVERS OVER \$25,000 OF CARRIED-OVER GLYCOL

A major producer in Texas operates a 50 MMSCFD conditioning plant for processing gas to sales gas. The conditioning plant, as shown in Figure 1, sweetens the gas, dries it, with the resultant clean, dried stream sent forward as sales gas.

### Problem Areas

The glycol unit, in this plant, was experiencing severe glycol carry-over problems in the range of 0.5 - 0.7 gallons/ MMSCFD. The operator and dehydration vendor could not solve the carry-over problem, which amounted to 25 gallons per day or over 9000 gallons of glycol per year lost with the sales gas. Also, glycol was being continually added to the system.

### Solution

The operator then installed a Pall LG Liquid/Gas Coalescing Filtration System downstream of the glycol dehydration system in order to recover the carried-over glycol. The LG Coalescing Filter Assembly removes glycol as well as other liquids and solids to an effluent level of less than 0.003 ppm with 99.98% removal of all aerosols 0.3  $\mu$ m and larger. Pall studies indicate that most of the aerosols in a gas stream are between 0.1 - 0.6  $\mu$ m in size. The LG Coalescer, because

of its 0.3  $\mu$ m absolute rating, coalesced and removed these size droplets. The operator has only found liquids in the upper sump, which confirms Pall's studies and proves that the LG Coalescer removal efficiency is accurate. The vessel containing 12 LG filters (part number CC3LG7A) was installed for a flow rate of 50 MMSCFD at 700 psig.

### Results

The LG installation allowed the operator to recover and to reuse the carried-over glycol. The glycol, from the upper sump, is drained directly into the flash tank prior to the reboiler. As shown in Table 1, the direct savings to the operator was approximately \$26,000. The LG Liquid/Gas Coalescing Filter Assembly was operating at its initial differential pressure of 3-4 psid, after 4 months in service.

**Table 1. Actual Economic Benefits**

Problem	Total Savings per Year <sup>1</sup>
Glycol loss from contractor of 0.5 gallons/MMSCFD from a 50 MMSCFD unit	\$26,280

<sup>1</sup> Assuming glycol costs 0.36/lb.

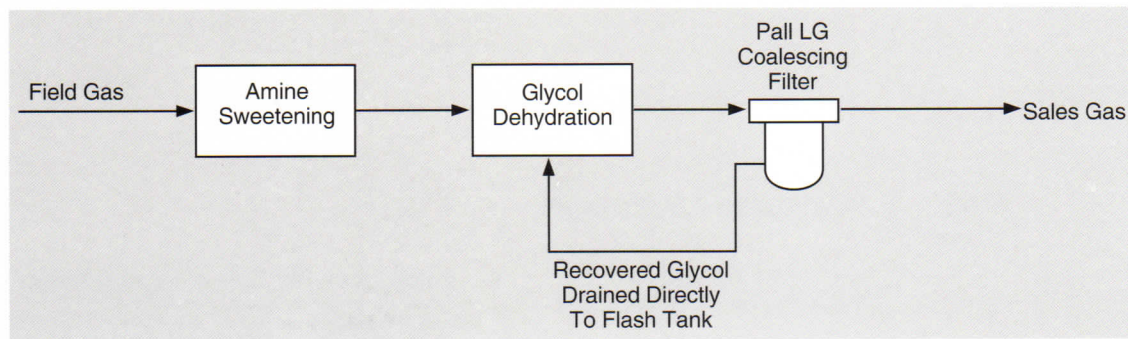


Figure 1. Conditioning Plant Schematic



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