A Louisiana NGL fractionation plant was facing challenges with their rich amine filters. Due to the inefficiency they were experiencing, they had a plant upset and had to change out 239 elements 11 times over a period of 4 days. These were 2.5” x 30” string wound filters, a conventional filter used in the industry but extremely inefficient. Prior to the upset, normal element change outs were every 10 days.

Through discussions with the plant manager, we came to understand their issues and the Pentair team went on-site and took gravimetric samples and vessel measurements. We followed with a recommendation of upgrading one of their two amine filter vessels with a plan to upgrade the second at a later date. The upgrade was to include a reengineered tube sheet and our Compax® coreless elements and semi-permanent cores for particle/liquid separation.

This upgrade option reduced the entire element count from 239 to 35. The existing, conventional configuration of 239 string wound elements had a total of 570 sq. ft. of element surface area. By utilizing our Compax® elements, it reduced the number of elements to 35 and brought the total sq. ft. of element surface area to 4,270. That is a 7.5 times increase in the surface area which creates longer online life and more efficient separations.

The plant is now running at least 30 days before change outs and they have also acknowledged a much cleaner rich amine product with zero bypass issues. This creates a dramatic, positive impact on operational costs and immense value by producing quality product in their rich amine.

This opportunity and the performance associated with it has led to discussions around our HRT® (Hydrocarbon Recovery Technology), which was recently purchased.