After our successful Compax upgrade of amine unit solid/liquid separators a few years earlier, the process engineer associated with that project presented us with a new opportunity tied to a Sulfur Plant expansion. He wanted to utilize our solid/liquid separator technology in 6 expansion vessels that would remove Iron Sulfide contaminant from a 214 gpm, 61 psig, 170 degrees F and .388 cP amine stream. However, the following conditions presented immediate challenges for us, regarding our attempt to upgrade those vessels:

- The vessels, which would be used for amine quench water, amine particulate and carbon bed after-filtration, were already at the refiner’s site and had unique internal hardware to support 3M brand 10 & 50 micron (absolute) Series 740 style cartridge element (see photos below),
- Because the vessel startup was to take place in just 2 months there was not enough time for us to measure the vessels, fabricate any necessary modification hardware and install that hardware, which would have been the sequence of events associated with a NexSys upgrade.

After internal conversations between our product marketing and NexSys team members a “direct element replacement” became the strategy for the upgrade because it appeared that our FEU7136 style element might fit the vessels without any additional hardware required. A few weeks later we were able to coordinate a NexSys field service measurement of the vessels with the refiner to confirm mechanical compatibility of our FEU7136 element. Once that was confirmed we quoted the refiner and received 2 very substantial orders yielding nearly 1000 elements (to the right is the filter element used in this upgrade). The refiner has since started up all 6 vessels, utilized thousands of our elements and is happy with their performance – a terrific situation for him and Pentair.