

Plating Bath Filtration Upgrade

Background

The plating process involves a series of plating and rinse baths to prepare a products surfaces for plating and then to apply the plating material (re: chrome, brass, gold....). It is critical that each bath is free of contamination (solid particles and oils) to ensure that the process will result in a defect-free plated part. A Northeast Filter salesman approached a large plating facility to pursue filtration opportunities. When he asked if they were satisfied with their current filtration, he was informed that one of their baths experienced unusually short on-stream life and high OPEX as compered with the rest of the baths. They also advised that lately they had experienced chronic rejects on plated parts due to "surface blemishes". When the Northeast Filter rep expressed interest in working with them on this filter, they cautioned him that others have attempted to address this filter and because it was a custom fabricated housing, they did not have product that would properly fit and they were reluctant to trial anything new unless we could demonstrate at least "equal to" performance. Additionally, Northeast Filter had to sign a confidentiality agreement before we could proceed.

Solution

This application presented the VAS team with two challenges. The first challenge was to demonstrate that we could offer a product with at least "equal to" performance to warrant consideration. The second challenge was to find a way to fit into their unique custom housing. To address the first concern, the customer witnessed on-site comparative analysis filterability tests with media cut from the competitor's filter vs. various media options we could provide. We identified a filter media that offered the same retention efficiency and slightly better throughput as compared to the current filter. To address the second challenge Northeast Filter performed vessel measurements of the current filter and designed an adapter plate from measurements taken. Northeast Filter had the adapter fabricated and the customer agreed to a trial. The adapter and the filter were a success and offered improved performance with improved particle retention and "equal to" on-stream life at a competitive price.



