

## The Request

Got a phone call from Ken B. He says that they have a waste treatment with a process that works but they'd welcome a system audit to see if further improvements can be made.

Sounds interesting. I set the audit for next week.

## The Audit

Met with Ken and toured the facility. The company does powder coating with at least two automated lines for large and small parts.

They've got two hand powder coating booths and one spray booth for clear coats and Teflon coating.

There is a five stage auto washer and hand cleaning tank line using alkaline cleaners, rinses, de-ox and zirconium sealers. (The five stage washer uses same chemistry with the exception of different sealer).

Stripping is done by using a hot fluidized sand bed in an oven that's maintained at 850°F. Parts can be stripped in 15-20 minutes and multilayer racks in one hour.

Waste treatment is done with two chemicals: A flocculent cationic solution and poly aluminum chloride. They also use an oil in water emulsion breaker.

System flow for batch treatment: 1,600-2,200 gpd

Ken said he has had a couple of other companies in and that they tried to improve the process but could not provide good constant results.

He says the present chemistry works but he'd like improvement if possible. Time to run some tests.

## Jar Testing & Goal Setting

Six Jar tests were completed using ACP, T-1000, Aquapure 107, and I-300, P-601, Aquapure-100 and B-cat.

Ken commented how impressed he was with the amount of equipment and chemistry I had. He said the other companies did not do anything like this.

The goal is to get a quick settling flocculant so he could complete 2-3 batch treatments per day. He's not a fan of ferrous products because of the mess, but said he may reconsider if it proves better results.

Based on the jar tests, Ken approved a trial using a drum of Aquapure-100, P-601 and 5gal B-cat.

## Monkey Wrench #2

Met with Ken before the trial to perform an Aquapure

That's when he said he wants to compare another company's treatment against ours to see which has better flock and quicker settling.

But... and this is where it got interesting; Ken brought out notes he used when he did bench testing with his current chemistry. He marked up the dosing for our 1-liter sample test.

To my surprise, my 4mls/gallon of Aquapure-100 has to compete with 16mls/gal of the other company's chemical coagulant.

Needless to say, the higher dose of the competitor chemistry looked better and settled quicker. So I added another 4mls/gal of Aquapure-100 and 6ppm of B-cat.

He attempted a jar test adding it to a beaker and it seem to get larger and settle.

I told him I'd be out tomorrow.

## Schools in session

Spent the day with Ken's wastewater guy. Trained him on testing and setting chemical adjustments. I also gave him a handy Excel spreadsheet tool to assist with the flow/math calculations.

Ken was very happy and told me to please stop by anytime when I am in the area.

It's always nice to walk out of a client visit feeling like you really helped a person out.

## Got the thumbs up, today!