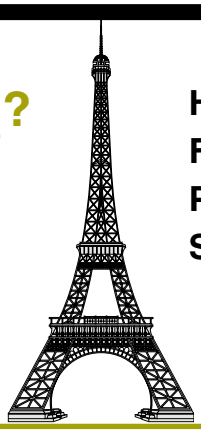
SERFILCO® CASE HISTORY

WHAT DO YOU DO WITH 14 TONS OF CrO_3?

REMOVE IT OR CLEAN IT UP AND PUT IT BACK INTO YOUR PLATING TANK?



HERE IS A FRENCH PLATER'S SOLUTION

CUSTOMER:	Uranie, Paris, France
BUSINESS:	Very large hard chrome plating operation
BACKGROUND:	Customer objective is zero plating rejects and zero waste treatment. Water from rinse tanks was being used to top up levels in the large 24 m3 (6,340 gallons) plating tank. Condensate from the fume extraction system was routinely added back to the chrome plating tanks, but this caused plating rejects and poor corrosion resistance because the condensate contained small amounts of oil and iron particles originating from nearby grinding machines. The contaminants were sucked into the fume extraction system and, therefore, contaminated the plating solution when the condensate was added back to the plating tank. Having identified the problem, Uranie stopped adding back the condensate and transferred it to a 25 m3 (6,600 gal.) holding tank, which was heated to evaporate water and reduce the solution volume. With a CrO3 content at 600 g/l, this was equivalent to 14 tons of CrO3. This expensive procedure was only a temporary answer while Uranie consulted SERFILCO for a good technical answer to treat the 600 g/l CrO3 concentrate. If a good solution could not be found, the cost to Uranie was CrO3 loss and industrial removal from the site.
SERFILCO PROPOSAL:	A special filter and carbon purification system was proposed and installed. The system consisted of a ½" PVDF air operated diaphragm pump connected to a Series 'S' filter chamber in CPVD [Model CL30(1)] fitted with 1 micron Hi-Perf cartridges and two CC1 carbon purification chambers in series. All three chambers were fitted with valves for taking samples of the solution at each stage of the treatment.
RESULTS:	Results have been very spectacular – all 14 tons have been purified and added back to the plating tank. Plating quality is excellent and the customer's objectives have been achieved.
FURTHER DEVELOPMENT:	A coalescing chamber will be introduced to prevent the oil from shortening the carbon life. Extra valves will be added to allow water rinsing of the system to eliminate the risk of explosion cased by the exothermic reaction of CrO3 and carbon. Since carbon in contact with CrO3 would cause a build-up of heat, the carbon is rinsed with water to prevent the reaction when the system is not in use.

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