

CASE STUDY

TWICKENHAM

Water Process Solutions supplies Twickenham Plating Group with new Polyblend® polymer activation unit after 25 years of service from the former

cleanwater1



"Water Process Solutions have provided an excellent quality Polyblend system with professional service. The new system is working beautifully, as one has come to expect"

- Jason Steele of the Twickenham Plating Group

OVERVIEW

Started in 1949, Twickenham Plating Group (TPG) has continually delivered quality in service and technically advanced finishes for electronics, telecommunication, aerospace, automotive and military applications with a commitment environmental responsibilities. An ISO 9001 and 14001 company, Twickenham utilizes 'Best Available Techniques' (BAT) with respect to their effluent treatment and process streams to ensure waste minimization and appropriate discharge levels are met.

The wastewater produced by the plating process contains heavy metals, grease, oils and suspended solids. Due to the high toxicity and corrosiveness of the plating waste stream, pre-treatment prior to disposal is essential and a requirement of local utilities and municipalities. Installed in 1980, the TPG treatment facility utilizes an enhanced effluent treatment process with flocculation. The original installation utilizes a Polyblend® unit that had been operational and reliable for more than 25 years.

The Polyblend® PB series liquid polymer preparation system offers a unique two-stage method which utilizes initial high-shear mixing at the moment of initial polymer contact to prevent agglomerations commonly known as "fish-eyes". The polymer solution then passes through a baffle into a low-shear zone to allow the polymer chain to hydrate, elongate and expose a maximum of desired charge sites. This two-stage mechanical mixing of the emulsion polymer ensures optimal polymer activation thereby lowering the amount of polymer that needs to be fed in a process – creating savings and system efficiency.

Manufacturing on behalf of Cleanwater1, formerly UGSI Solutions, Inc., Water Process Solutions supplies disinfection and chemical feed systems including design and technical support to UK and European countries from their headquarters in Kent, UK. Within two weeks of inquiry from TPG, Water Process Solutions had delivered and started-up the Polyblend® unit.

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The compact 25 year-old Polyblend® PB on the left and the new Polyblend® HMZ on the right – both featuring a two-zone mix chamber for optimal polymer activation.