

Water & Wastewater Capabilities

General

- A comprehensive product line for all influent, wastewater and sludge dewatering chemical treatment needs is offered.
- A staff of support engineers specifically trained and experienced in all facets of water and wastewater treatment readily available with technical support for GE Water & Process Technologies applications.
- A Research and Development department working on new, innovative products to aid in meeting customers' water and wastewater requirements
- Specialized automated chemical feed and control equipment to feed products, ensuring optimum economical and performance issues are maintained
- GE owned and operated delivery vehicles for most products. This ensures the highest quality service for delivery of our products to your site
- Fully equipped and staffed modern analytical laboratories for testing and monitoring water quality issues in your plant
- Highly trained field engineering and sales representatives work closely with support engineering on all applications. This assures a **team** of GE personnel become involved in the treatment of your water systems.
- Production facilities that meet ISO 9002 standards
- State of the art field testing equipment provided to GE sales representatives, designed to assist in the accurate monitoring and testing of plant water quality.
- Modern SPC capabilities with the use of Info-Calc* for monitoring and reporting water treatment parameters. This provides customers' and sales representatives an accurate picture of process variables and interrelationships.

Influent Clarification Solutions

GE has been treating influent clarifiers of all types, including lime softeners, for decades. Our application expertise ranges from operational optimization to the selection and application of the best chemical treatment program for your solids separation and color removal needs. Our equipment group is expert at providing chemical feed automation solutions. The GE product line for Influent clarification encompasses over 50 different coagulants (KlarAid* and flocculants (PolyFloc*), covering a wide range of charge types, molecular weights and forms. Whether you need liquids, emulsions or powders, cationic or anionic products, GE has the solution for your raw water. Our field representatives and our corporate support engineers are trained in the art of product selection using "Jar Testing" and will tailor your treatment to meet your specific water quality. Reliability of operation is our number one objective.

Wastewater Treatment

GE capabilities in the wastewater area include:

- Solids separation – TSS removal (similar to Influent clarification)
- Metals removal – both particulate and soluble
- Oil separation – emulsion breaking and flotation enhancement
- Organics removal enhancement in biological treatment systems and sewers
- Foam control

Solids Separation

In both primary and secondary clarifiers, the GE line of modern coagulants and flocculants provide optimization of suspended solids removal, with minimum sludge production. Our KlarAid* and PolyFloc* products, combined with years of application expertise ensure the minimum necessary chemical usage and reliable results. With the wide range of products, we can select the combination of coagulants and flocculants to meet your needs, whether it be reliable results, minimum cost and/or minimum sludge gen-



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eration. e.g. our line of all-organic coagulants are particularly suitable for biological systems where addition of inorganic products is not desirable.

Metals Removal

As regulations become increasingly strict on metals discharge and as water reuse becomes more widely practiced, the removal of heavy metal contamination becomes more important. The GE approach is to carefully diagnose your situation and determine the correct balance of solids separation and metals precipitation technology needed. In addition to our standard coagulants and flocculants, GE has several proprietary Metals precipitants in our MetClear* product line. Our combination of technologies will provide far lower residual metal concentrations, of all the standard heavy metals, than other traditional treatment approaches.

Oil Removal

Oil removal equipment often cannot meet the low residual oil levels required to meet modern discharge regulations or to protect biological systems. Treatment with GE line of emulsion breaking and flocculation products can provide the clean-up needed in today's plants. Our KlarAid*, Novus* and/or RecOil* products will break most emulsions and enhance the speed of oil separation. The Novus* line of proprietary and patented cationic flocculants have delivered superior results, often with no other chemical, on refinery flotation units. Our application expertise is also brought to bear on the issue of sludge handling costs. With the increasing cost of handling and disposing of hazardous oily sludges, the use of inorganic chemical treatments is not usually the most cost-effective treatment due to the large production of extra sludge. Use of GE organic products ensures minimum sludge production, with excellent emulsion breaking.

Organic Contaminant Removal

GE carries a wide range of specialty bacteria and micronutrients designed to supplement and increase the efficiency of biological treatment systems. Our BioPlus* line of products includes specially enhanced bacteria, selected for their natural ability to remove specific problem contaminants such as heavy hydrocarbons, phenols, surfactants, FOG, etc. These products, combined with detailed engineering assessment and bio-chemical monitoring, allow our field representatives to keep your secondary treatment system in a more healthy and stable condition. This leads to better performance and reliability.

Foam Control

GE also carry a wide range of defoamers or anti-foam products that can solve all of your foam problems. Our representatives approach your foam problems in the same practical manner that they approach all of your water treatment needs. They will go onsite, assess the situation and then carry out testing of the range of FoamTrol* products to pick the best one for your wastewater.

Sludge Dewatering

GE also carries a wide range of products to cost-effectively condition sludge prior to thickening or dewatering operations. Sludge handling is often the single largest cost in many wastewater plants. Thus, effective dewatering operations are critical to minimize costs. Our line of polymers, especially the Novus* and PolyFloc* flocculants includes many products that were developed specifically for optimizing sludge dewatering operations. These products have been used for many years on a wide range of thickeners and dewatering devices, including belt presses, centrifuges, rotary screen thickeners and screw presses. We have recently enhanced our Novus* line of dewatering polymers with the addition of polymers specifically designed for the high shear environments in centrifuges. These structurally engineered products were designed to enhance the performance of the centrifuges used in industrial and municipal wastewater operations. Since these polymers can withstand the sheer forces in the centrifuge, they can be utilized at lower dosages and yet still provide a dryer cake than any other polymer.

Odor Control

In the last few years GE has introduced the most comprehensive line of odor control products in the marketplace. Our ProSweet* line of products includes hydrogen sulfide and mercaptan scavengers that are unique to GE and which have proven themselves in a wide range of situations where no other solution has proven cost-effective (e.g. meat packers, sewage collection systems). These products are non-toxic, non-corrosive and generate no sludge. Other products in the ProSweet* line cost-effectively neutralize non-sulfide odors, such as amines and organic mixtures produced in food operations. Our products can be added directly to the water phase, or can be misted in water or air delivery systems. Thus, a wide range of solutions is available depending on the specific customer needs.