Para-Toluene Sulfonic Acid

**WOO Series:**
- Acetaldehyde
- Acetic Acid
- Aluminium Chloride
- Ammonium Sulfate
- Butyraldehyde
- Cellosolve
- Dimethyl Sulfoxide
- Dimethyl Sulfide
- Formaldehyde
- Formic Acid
- Glycerol
- Glyceric Acid
- Glycols
- N-methyl pyrrolidone
- Phosphoric acid
- Potassium Carbonate
- Potassium Chloride
- Potassium Hydroxide
- Potassium Nitrate
- Potassium Sulfate
- Phenol/Phenolics
- Polyglycerol
- Para Toluene Sulfonic
- Silica
- Sulfuric acid
- Sodium Bromide
- Sodium Bisulfite
- Sodium Chloride
- Sodium Formate
- Sodium Hydroxide
- Sodium Metabisulfite
- Sodium Sulfate
- Sodium Sulfite
- Sodium Silicate
- Sodium Thiosulfate

**Go Green Profitably**

Economically recover para-toluene sulfonic acid from waste water stream.

Geist Novel Reactive Precipitation Technology is the preferred solution for separation of PTSA (70% aqueous solution) from dilute aqueous stream of PTSA salts.

**Typical Case study:**
- Aqueous Stream Capacity = 5000 kg/day with 15% Ammonium-PTSA
- Market Price of PTSA = Rs 52/kg
- Value of PTSA in waste stream = Rs 106 lacs per Annum
- Cost of treatment = Rs 4.5 lacs per annum

For PTSA recovery by NRPT:
- Cost of Separation of PTSA (70%) = Rs 16/kg
- Cost of Major Equipments = Rs 26.5 lacs *
- Other project costs = Rs 32.5 lacs
- Net Savings = (Material Cost+ Treatment cost-Separation cost) = Rs 78 lacs/Annum
- Return on Investment (ROI) = 9 months

**Advantages:**
1. Complete recovery of PTSA
2. Significantly lower capital expenditure. Very attractive return on investment
3. Works in presence of other organic or inorganic impurities.
4. Saving in the overall production cost because of increased recycle & reuse.
5. Reduced load on treatment and / or disposal.
6. Environmental friendly process and can be converted to zero discharge.
7. Easy to operate.

* Separation cost & Cost of equipments is case specific and may vary with the concentration of Ammonium-PTSA, stream quantity, utility rates and other impurities present.