BRIEF PLANT DESCRIPTION

The PET reaction trains use the technology from DuPont for TPA based esterification process and the upgrades to enhance the polymerization capacity. This technology includes six (6) process sections: PTA & MEG slurry mixing, esterification, catalyst and additive injection, pre-polymerization, polymerization, and ship formation. The pre-polymerization uses glycol enhanced mass transfer without mechanical agitation. The polymerization occurs by a cage-type finisher agitator without central shaft. Continuous wiping of finisher vessel wall eliminates degradation. The product bottle resin has polymer IV 0.6 (+/- 0.01), catalyst concentration less than 250 PPM as Sb, DEG content 1.2% in polymer, IPA 2.15% weight, toner (Cobalt Acetate) 60 PPM, phosphoric acid 20 PPM, COOH 40, acetaldehyde 90 PPM, moisture content 0.2%, bottle weight 15 – 18 mg/chip, chip size 3.0 x 2.0 x 2.5 mm. The SSP (Solid State Polymerization) plant uses UOP technology further processes the PET resin of 0.60 dl/g IV into 0.84 dl/g IV, which is bottle grade quality resin. The SSP process includes 4 steps: (1) crystallization, (2) annealing, (3) SSP reaction, (4) cooling.