Plant # 460

Nylon 6 Polymer Plant for Sale

Capacity
Total: 140 metric tons per day
Line 1: 100 metric tons per day
Line 2: 40 metric tons per day

Raw Material
Caprolactam

Plant History
1999 – Commissioned

Major Equipment
Polymerization Reflux Column
Extraction Column
Drying Column
Dryer Upper Blower
Dryer Mid-Section Blower
Polymerizer (Polymerization Reactor)
Polymerizer Agitator
Deoxo Reactor
Dewatering Screen
HTM Expansion Vessel
Chip Slurry Vessel
Evaporation Scrubber
Lactam Preheater
HTM B/D Tank Vent Condenser
Polymerizer Vent Condenser
HTM Upper Evaporator
HTM Lower Evaporator
HTM Air Cooler
HTM Heat Exchanger

BRIEF PLANT DESCRIPTION

This plant was designed to make Nylon 6 Polymer in cylindrical chip form by reacting the monomer caprolactam in VK tube reactors. Caprolactam is polymerized under elevated temperature and moderate pressure, under the strict exclusion of oxygen and in presence of water to a high viscous melt. The plant includes two (2) production lines with capacity of 100 MTPD and 40 MTPD, respectively. Each line includes 6 major process sections: lactam / additive preparation and dosing, continuous polymerization, chip production, continuous extraction, continuous drying and extract water evaporation. The polymerization reactor can be subdivided into three main zones, all heated by a complex diphyl HTM heating system. The liquid monomer containing all additives enters the top of the reactor and moves downward by gravity. The raw polymer melt leaves the bottom of the reactor at a constant output rate and contains about 9% of unreacted monomer and cyclic oligomer by-products.

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