FULL COMPETENCE IN SPECIAL AND MASS POLYMERS

FLUIDIZED BED DRYING AND COOLING FOR POLYMERS AND PLASTICS
ANDRITZ Separation was among the first to introduce fluidized bed technology for use in industrial drying. We have been focusing on the development of tailored process solutions for our customers since the early 1960s.
Experience makes the difference

With our experience and target-oriented development of process solutions in our pilot plants, we are able to provide you with the optimum solution for your process at any time.

Polymers from suspension polymerization processes are mainly temperature-sensitive and carry moisture. Thus, it is important to choose the right drying technology to achieve the requested product quality in an efficient process. Fluidized bed dryers with integrated heat exchangers are a significant advantage in drying high production capacities efficiently at a low temperature level. High heat flux rates can be achieved with efficient, integrated heat exchangers designed specifically for the application and used for indirect heat transfer to the product. This provides the opportunity to minimize the size of the fluidized bed drying system and all its components.

A significant reduction can be achieved in energy consumption compared to only direct heat transfer to the product by fluidization media.

ANDRITZ Separation provides tailor-made solutions for drying and cooling of pellets in static and vibrating fluidized beds.

Drying of HDPE in a closed gas loop system

Drying medium

Heat exchanger

Moist HDPE

Pump

Hexane

Scrubber / condenser

Cooling medium

Steam

Condensate

Hexane vapours

Condensed hexane

Fan

Cyclone

Screw conveyor

Gas heater

Dry HDPE

Fluidized bed dryer
Process development to improve product quality

WE SUPPLY
• Competent consulting
• State-of-the art technology tailor-made for your application
• Energy-optimized solutions with focus on feasibility
• Compact equipment layout
• Solution operating fully automatically for increased reliability
• High safety standard for every customer
• Low maintenance effort and turn-down times

TYPICAL APPLICATIONS
• Polyethylene (HDPE)
• Polyvinylchloride (PVC)
• Adipic Acid (AA)
• Acrylonitrile Butadiene Styrene (ABS)
• Polymethylmethacrylate (PMMA)
• Polyoxyethylene (POM)
• Polyacrylamide (PAA)
• Polypropylene (PP)
• Terephthalic Acid (PTA, GTA)

COMPLETE SYSTEMS FOR THE FOLLOWING DRYER TYPES
• Vibrated fluidized bed dryer and cooler
• Stationary fluidized bed dryer and cooler (direct heating)
• Stationary fluidized bed dryer and cooler with in-bed heat exchangers
• Belt dryer and cooler

YOUR BENEFITS
• Tailor-made systems to meet your particular needs
• Maximum energy efficiency from optimized process configuration
• Customized product quality
• Low costs over the entire life cycle
• Extensive test facilities to resolve your specific drying challenge
• Market leader in fluidized beds with incorporated heat exchangers
• Line capacities from less than 100 kg/h to more than 1000 t/h

Fluidized bed unit for polymers
Fluidized bed unit for polymers
SAFETY
Most of the polymers and related solvents are flammable or explosive. Using their many years of experience in drying of explosive goods, our specialists will choose the optimum safety technology for your plant. Feasible options are a pressure-resistant or pressure shock-resistant, design with relief devices, explosion suppression systems, or inertized drying in closed gas loop systems.

LAB-SCALE AND PILOT TESTING
Our R&D center with its qualified personnel and integrated laboratory is at your disposal to develop your process or examine your specific tasks.

Main services
Our services include development, planning, design, manufacturing, and delivery of single key-components or complete systems, as well as supervising their installation and commissioning.
Intelligence for machine and process control

Metris addIQ control systems

With Metris addIQ, you get a well-proven, intelligent control solution for industrial processes and machines. Our solid/liquid separation specialists use their in-depth expertise to provide scalable solutions that are individually tailored to regional and application requirements. Whether you’re automating new equipment or upgrading to extend the lifecycle of existing systems, we find the ideal solution for you.

Your full-service provider

With ANDRITZ Separation, you gain access to one of the world’s largest OEM manufacturers for solid/liquid separation systems, including such well-known brands as 3Sys Technologies, Bird, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Frautech, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, Lenser, Netzsch Filtration, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer, and Vandenbroek. Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ Separation is your true full-service provider. From initial consulting through to service agreements, process optimization, and training programs, we are always looking for ways to minimize downtime and increase predictability in operations while raising your overall production efficiency. Wherever you operate, our network of 550 service specialists and global service centers ensures we’ll always be there to support you for many life cycles to come. Let’s sit down and see how we could take your operations to the next level.
WHAT’S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world’s leading Separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of Separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world’s leading brands, we have the solutions and services to transform your business to meet tomorrow’s changing demands – wherever you are and whatever your Separation challenge. Ask your Separation specialist!

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