

## Fines Recovery

Our worldwide experience of operating in different industrial sectors and in heavy duty design specific for the rubber & tire industry allows us to provide:

- Latest generation bag filters and bag house;
- Increase in existing filter performance through the use of the "cone-bag" technology;
- Traditional cyclones and high-performance selectors;
- Silo & hopper filters (pressure & vacuum type).

## Products Handled

- Amorphous Silica
- Calcium Carbonate
- Carbon Black
- Kaolin
- Pigments
- Polyester Resins
- Small Chemicals
- Stearic Acid
- Zeosil
- Zinc Oxide



## Automation & Service

Software and Hardware Systems designed to keep under control your plants in a simple, reliable, flexible, expandable way and at low cost.

Functions: • Traceability • Batch management • Production management • Maintenance • Efficiency graphics • Quality management.

NTE Process is a unique source for process handling and control, and provides also a completely customized service to customers. Benefits: • Continuity of production • Reduction of maintenance costs • Respect of quality procedures • Operator safety.

## NTE Scientific Hub

We offer our customers the opportunity to test our technologies directly on our 1:1 scale Test Plant.

We perform scientific tests (fluidity, aeration, consolidation, etc.) as well as full scale tests (spray drying, drying, solid-liquid mixing, parallel processing, pneumatic conveying, etc.) to better simulate the output of each technology in real conditions and have a predictive analysis of the performance, energy consumption and all the details necessary for the correct design of industrial plants.



**NTE**  
P R O C E S S

**Premium  
Technologies for  
Top Performance**



**CONVEYING IDEAS  
INSPIRING SOLUTIONS  
BUILDING SUCCESS**

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- SINGLE SOURCE PROVIDER for turnkey solutions
- Carbon black and silica friendly handling systems that avoid fines production during conveying
- User friendly SCADA & PLC control code for batch integrity

NTE Process is the Single Source Provider specialized in the process solutions for industry and in bulk material handling that will support you in all phases of design, supply and innovation of industrial plants.

Among our technologies dedicated to rubber and tire there are:

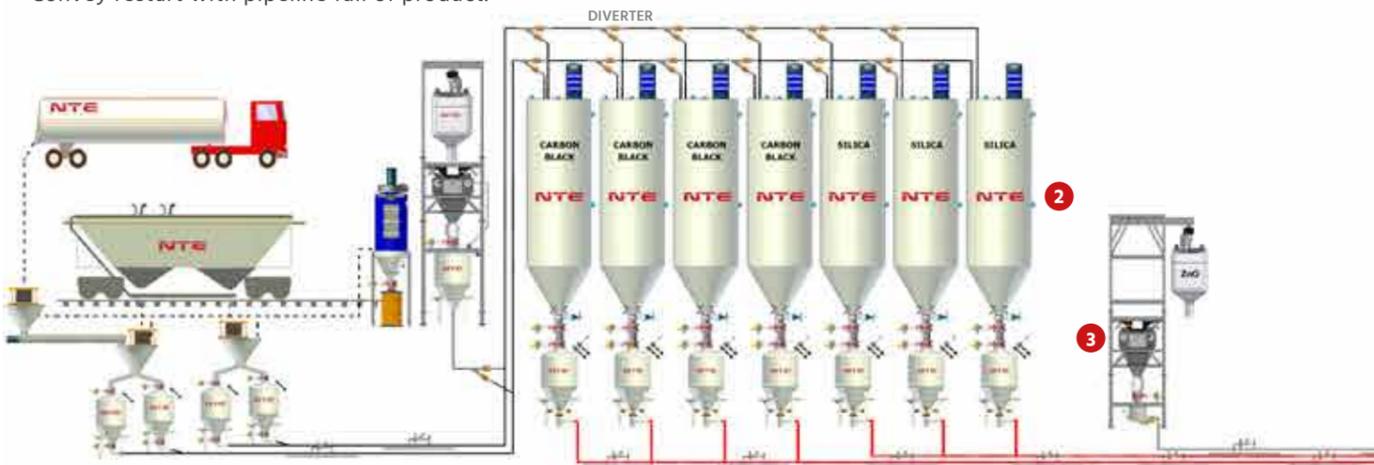
- Truck and rail unloading
- Storage of raw materials
- Eco Dense-Tronic®: pressure dense phase conveying, «no purge»
- Dedusting systems for storage silos and daybins
- Accurate batching for powder and oil dosing
- Dust collection
- Rubber cutting and rubber sheet concept with Air Assist® technology
- In-line formulation for additives
- Automation and control

## AIR ASSIST® PATENTED TECHNOLOGY

The NTE Process Air Assist® technology is specific for dense phase conveying, truck silo loading and batching systems.

Benefits:

- Low convey speed (up to 5m/s)
- Reduction of abrasion of piping components & product degradation (FINES <5%)
- Special technologies to convey carbon black silica, silica chunk, small and medium chemicals
- Convey restart with pipeline full of product.



Carbon Black and Silica complete plant

1 Air Assist® M366

Truck/Railcar Unloading

Dense Phase Patented Technology with Air Assist®

## BULK BAG UNLOADING

The revolutionary design of the NTE Process bulk bag unloader allows any type of dust free discharge with hoist or forklift with maximum efficiency, in a fast and clean way.

The Model M348 allows the operator to work in a safe environment, without any dust leakage during unloading. This equipment has been designed to accommodate a variety of bag styles and sizes. The integrated filters protect the operator from contact with product and releases accumulated fines into the hopper when the filter is reverse-pulse cleaned.

The Model M358 with tensioning valve M501 avoids direct contacts between operator and product. It is possible to modulate the flow with the application of an iris valve, either manual or automated. Available also in mobile version, the Model M506 COMBO allows a dual use of bags in combination with big bag unloading as unique unit.



3 Bulk Bag Unloading

2 Storage Silos and Filters

## LIQUID DOSING & OIL INJECTION

With a close cooperation with Rubber Compounding and Tyre Companies, the NTE Process R&D Team developed an innovative Liquid Dosing System with possibility to inject directly into the mixer or conditioning the daily silo with temperature control up to 80°C.

Such system uses the Jetmixer® M531 equipped with the new Aerator M532, patented by NTE Process, that injects oil/liquid directly inside the powder day bin. This aerator has been created with an adjustable valve and a smaller air injector capable of handling small batches, also allowing a better atomization of liquids during blending.

The innovation of the system consists in injecting oils or liquids into the batch thanks to the use of the Liquid Injection Skid Unit M535. This allows to inject from 1 to 6 different oils/liquids, opportunely heat traced and thermal insulated, if required by the process. The system, as described above, permits the entire process to work in both configuration Dry or Wet, enriching the batch from dry to wet with a liquid content up to 50%. The liquid injection during the air blending process, increases the homogenization and the permeability of the liquid parts into the dry portion. This results in a more effective solution impacting in an important way in the performance of the immediately following processes to the blending.



Jetmixer® Lab Unit M537

4 Oil Injection Skid Unit

### BENEFITS

- Full automatic system
- Precise and reliable injection for high viscosity liquids
- Full integration with existing recipe management
- No cross-contamination
- No fines during discharge into Banbury



Daybin & Dosing System

Fines Recovery

Wonderbatch®

## BATCHING SYSTEM

The operating success of tire and rubber compounding process depends on the high availability and reproducible product quality. NTE Process developed his own Recipe Management and Scada system in order to achieve maximum reliability and accuracy.

Best products and equipment jointly to innovative and continuous improved technology guarantee the best dosing performance of raw materials, silica, carbon black, and chemicals. The process is fully designed for the specific customer requirements and is completely tailor-made for each product characteristic.

Moreover the continuous and batch-based system solutions can count on a special designed Hypalon hopper on load cells which can be easily feed and discharged with negligible losses.

### BENEFITS

- Batch accuracy and integrity
- Complete tailor made system and user interface
- Reliable standard and design
- Easy to expand and managed system



5 Dosing System



Flex Wall Batch Scale M524