

PROCESS

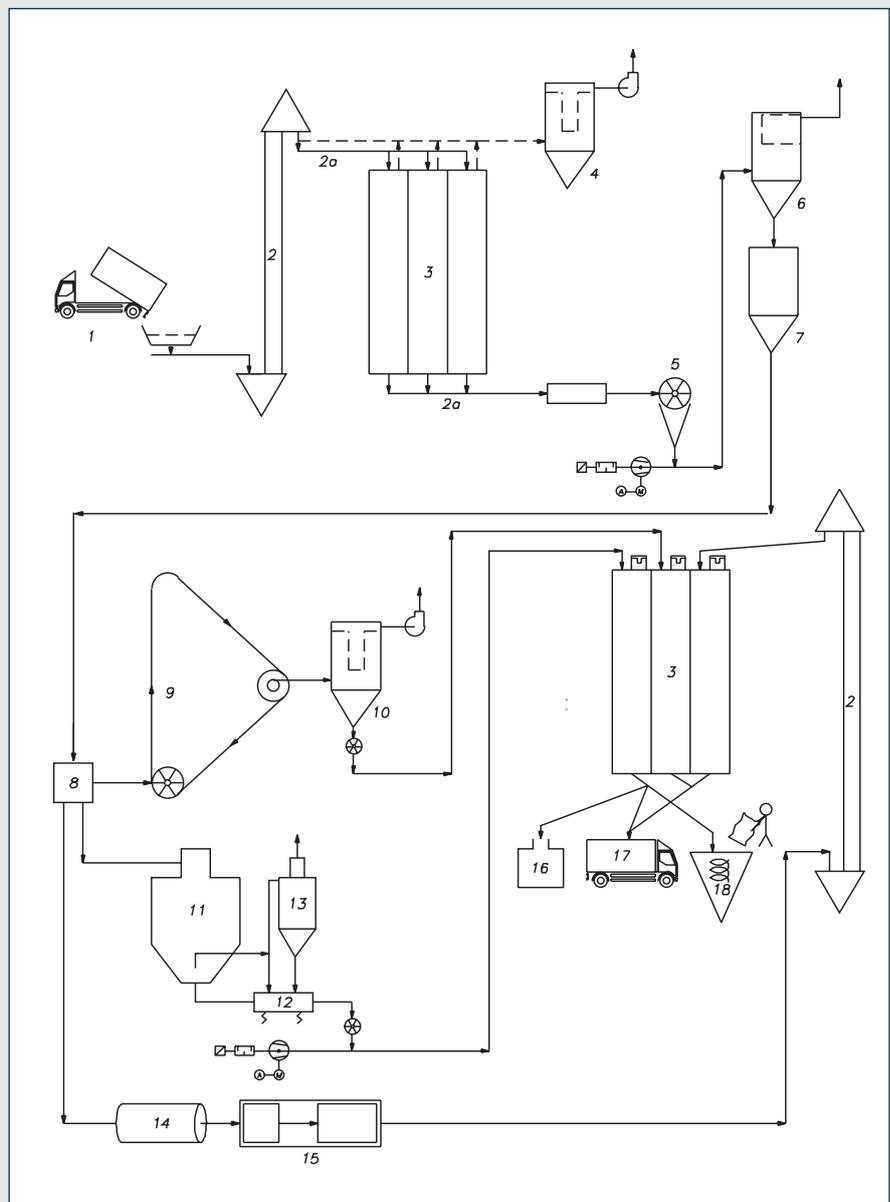
INTRODUCTION

The figure on the reverse side is a schematic diagram of a typical installation where dry raw material is supplied, stocked, cleaned, milled, processed into a finished product, dried, pressed, cooled and finally stored in an end silo. The lay-out of this installation is of course totally fictitious and has been chosen for the sole purpose of being able to illustrate as many process steps as possible.

On the following pages we will discuss the risks linked to the various process steps and indicate in which way the various equipments can be protected against an explosion.

Important

- ▶ A dust explosions risk analysis depends to a great extent on the properties of the product concerned, such as its ignition sensibility, and the explosion vehemence. The analysis and the protections proposed in the following pages are to be seen as an example only and can, without preceding further investigation, **never** be applied to a real installation.
- ▶ In the examples mentioned in the following pages we enter at length into the specific protection aspects for a specific process. More general matters, such as good cleaning, application of (explosion) safe equipments, venting into a safe direction, are not mentioned, but should, in practice, certainly not be overlooked
- ▶ If explosion risks are brought up, in most cases also fire hazards are involved. Specific fire protection measures are not discussed here.



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|---------------------|-------------------------------|----------------------------------|
| 1: Truck unloading | 7: Intermediate bunker | 13: Cyclone |
| 2: Elevator | 8: Process black box | 14: Drum dryer |
| 2a: Redler | 9: Ring dryer | 15: Press - cooler |
| 3: Silo | 10: Product separation filter | 16: Loading station |
| 4: Dedusting filter | 11: Spray dryer | 17: Truck loading |
| 5: Mill | 12: Fluid bed | 18: Nauta mixer
with bag dump |
| 6: Receiving hopper | | |

