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Feed machinery — Vocabulary

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Foreword

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This document was prepared by Technical Committee ISO/TC 293, *Feed machinery*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Feed machinery — Vocabulary

1 Scope

This document defines terms related to feed processing technology, machines and equipment widely used in feed mills.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms related to feed processing technology

3.1.1
air-assisting
using the forced air to enhance working efficiency, control dust, particle size, temperature, pressure and/or moisture

3.1.2
batching
dosing and weighing ingredients to combine them to meet the formulation requirements

3.1.3
coating
covering the surface of an intermediate product uniformly with a predetermined amount of liquid, and/or powder

3.1.4
destoning
removing stones from raw materials by specific gravity differences, using airflow and screening surfaces

3.1.5
dry mixing
mixing dry, solid ingredients without the addition of liquid ingredients

3.1.6
extruding
pressing or pushing feed through constrictions to continuously shape a feed

EXAMPLE Using a machine with one or more rotating screws and die.

3.1.7
flushing
passing a predetermined amount of a specified material through a machine or a closed feed production system to clean it and reduce contamination of next feed production cycle

3.1.8
grading
sorting materials by different physical properties, such as size, density, colour, and often according to existing standards, either mechanically or manually

3.1.9
hygienizing
reducing micro-organisms in feedstuffs

3.1.10
liquid addition
inclusion of ingredients in a fluid state to the intermediate product

3.1.11
micro dosing
adding micro-ingredients to the major mixture

3.1.12
post-cooking
holding feed in a container after shaping operations for a specified time prior to cooling or drying

3.1.13
post-grinding
performing the particle size reduction after *batching* (3.1.2) in a feed production line

3.1.14
pre-grinding
performing the particle size reduction before *batching* (3.1.2) in a feed production line

3.1.15
vacuum coating
coating (3.1.3) intermediate products in a pressure environment below the atmospheric pressure to encourage absorption of the liquid through the release of pressure

3.2 Terms related to feed machines and equipment

3.2.1
conditioner
machine for achieving predetermined moisture levels and/or temperature of ingredients or a mixture of ingredients prior to further processing

3.2.2
cooler
machine for reducing temperature and moisture by forced ambient or conditioned air through an intermediate product

3.2.3
crumbler
machine with rolls specially designed for breaking up pellets into smaller granular pieces

3.2.4
dry flow meter
device that detects and measures the flow rate of a dry intermediate product, usually operating on a continuous flow process

3.2.5
dryer
machine that is used to reduce the moisture content of material by use of airflow and energy transfer

3.2.6
expander
machine that uses a rotating screw to continuously push feedstuff through an annular gap, active disc system or crown

3.2.7
extruder
machine that heats up the product and propels it through the die to create the desired shape, using a system of barrels and cylinders that create increased pressure and sudden depressurization

3.2.8
extruder die
perforated plate installed at the discharge end of the *extruder* (3.2.7) barrel for shaping the feed product

3.2.9
feeder
machine that regulates flow and conveys material

3.2.10
hammer mill
machine that reduces particle size by impact from rotating plates (hammers) in a chamber

Note 1 to entry: A *screen* (3.2.23) is used to regulate the particle size.

3.2.11
helical ribbon
spiral component attached to the main shaft in a *mixer* (3.2.16) used to agitate ingredients

3.2.12
high temperature and short time conditioner
HTST conditioner
machine used for the pre-treatment and conditioning of animal feed that involves high temperature and high pressure for a short period of time

EXAMPLE An *expander* (3.2.6).

3.2.13
liquid homogenizer
machine used to reduce particle size of liquid components and mix them uniformly

3.2.14
lump breaker
machine that breaks up large materials or conglomerates

3.2.15
magnetic separator
equipment that removes ferrous materials by magnetic attraction

3.2.16
mixer
machine that blends ingredients to homogeneous product

3.2.17
paddle
tool attached to the shaft to mix and/or convey material

3.2.18
pellet die
part used in a *pellet mill* (3.2.19) with hole openings through which the mixed mash feed is pressed to form pellets

Note 1 to entry: It may be mounted in different orientations and be a ring or flat.

3.2.19
pellet mill
pelletizer
pellet press
machine used to agglomerate feed by compacting and forcing it through die openings to be formed into pellets

3.2.20
pulverizer
machine used to grind small particulate with air assist

Note 1 to entry: It is typically vertical in orientation and capable of grinding up to 100 µm.

3.2.21
retentioner
machine for retaining the preconditioned mash feed for a length of time at a predetermined temperature and moisture setting

3.2.22
roller mill
grinding machine mainly comprising one or more pairs of parallel corrugated rolls rotating in opposite directions

3.2.23
screen
equipment used to separate particles by size and shape

3.2.24
working tank
tank that holds pre-adding or pre-coating liquids before the mixing or *coating* (3.1.2) process

Note 1 to entry: The amount held in a working tank is predetermined by operations.

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