

Carry out bulk handling grain and flour in milling

Overview

This standard is about the skills and knowledge needed for you to carry out bulk handling of grain and flour in milling.

Industry regulations and standards in food and drink operations need to be followed when preparing and carrying out bulk filling and closing down plant and equipment. You will need the skills and knowledge to carry out bulk storage and understand the importance of flour blending. It is also about grain and flour pests and their effective control.

This standard is for you if you work in food and drink manufacture and/or supply operations and you are involved in bulk handling grain and flour in milling.

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Performance criteria

You must be able to:

1. check that the work area is well organised, clean and tidy in accordance with company procedures
2. receive and confirm bulk filling specification
3. confirm that services and filling equipment are available and complies with relevant regulations
4. identify the container/silo to be filled and confirm that it is available and complies with relevant regulations
5. check that the delivery weight/volume corresponds with space available in the container
6. check that equipment is in correct working order
7. check that necessary documentation is completed
8. carry out bulk filling to specification
9. monitor to check that output rates are in line with specification
10. monitor containers/silo and deal with any which do not meet specification
11. achieve the required output to specification
12. finish bulk filling according to specification
13. close down the plant and equipment in accordance with company procedures
14. deal with any operational loss or gain in accordance with company procedures
15. deal with any loss or spillage in accordance with company procedures
16. prepare and carry out bulk filling in accordance with health and safety, hygiene and environmental standards or instructions

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Knowledge and understanding

You need to know and understand:

1. what the advantages and disadvantages of bulk storage systems are
2. the factors which influence the choice of bins and bin design
3. how bin discharge of grain using FIFO, Chinaman's Hat and conical hoppers
4. how bin discharge of flour occurs in fluidised, mechanical and vibrating dischargers
5. what the function of central or individual bin exhaust systems are
6. the hygiene and safety implications of bulk bins, cleaning and explosion relief
7. how bran, pellets, wheat germ and wheatfeed should be stored
8. the problems of wheat storage; husbandry of wheat storage, damp/dry grain heating, heating damage, heat detection and control of damp/dry grain heating
9. what the process of flour blending is, and why it is important to the milling process
10. the functions of flour blending systems including batch blending/mixing and on-line blending/mixing plant
11. the components of a flour blending system including weighers, mixers and homogenisers,
12. what the types of vehicles used to transport flour and by-products are, and how they are loaded and unloaded
13. what the range of primary and secondary insect pests are which can contaminate stored wheat and flour
14. the main bird and rodent pests which can contaminate stored wheat and flour
15. what the different insect infestation control procedures are, how and when control methods are used
16. how bird and rodent pests are controlled
17. what different structural and spacial treatments there are

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