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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21163.2-2007

**Agricultural grain driers -- Determination of drying performance
-- Part 2: Additional procedures and crop-specific requirements**

农业谷物干燥机干燥性能的测定第2部分:附加测定规程和特定谷物要求

(English Translation)

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Table of Contents

- Preface
- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Symbol
- Test Method 4
- 5.1 Overview
- 5.2 Test of
- 5.3 Grain sampling times
- 5.4 Precipitation rate
- 5.5 Grains humidified

Foreword

GB/T 21163 "agriculture grain dryer drying performance measurement" consists of the following components.

- Part 1. General;
- Part 2. Additional procedures and crop - specific requirements.

This part of GB/T 21163 Part 2.

The partial modification of international standard ISO 11520-2:2001 "Determination of drying performance of agricultural grain dryers - Part 2. Additional Measurement procedures and crop - specific requirements "(in English).

This part of ISO 11520-2:2001 compared to the main modifications are as follows.

- The "international standards in this section" to "this Part";
- Deleted international standards foreword;
- Of ISO 11520-2:2001 is referenced in ISO 11520-1:1997, adopted as the equivalents of the GB/T 21163.1-Instead of 2007;
- Delete the part of the terms and definitions in footnotes;
- Remove grain humidifying the experience shows that wheat, barley and canola,

respectively humidified to 25%, 25% and 20%;

--- The evaporation rate of correction drying performance standard ambient conditions by the three countries to our climatic conditions substantially equivalent to three Code Type regions.

This part of the Appendix C, Appendix D is a normative appendix, Appendix A, Appendix B, Appendix E is an information appendix.

This part is proposed by China Machinery Industry Federation.

This part of the National Standardization Technical Committee on Agriculture machinery centralized.

This section drafted by. Chinese Academy of Agricultural Mechanization Sciences, Beijing middle peasants Khong Oils Technology Development Co., China Agriculture the University.

Introduction

GB/T 21163.1 only provides for continuous and batch dryer performance evaluation methods, and provided that the material is dried again Humidifying wheat, wet basis moisture content of 20% to 15%.

The method of GB/T 21163.2 specified in consideration of the following factors.

- Wider access to material moisture content range;
- Other crops other than wheat;
- Some infeasibility grain re-humidification and other thermal characteristics.

Under different environmental standards and specific grain conditions, the evaporation rate of the measurement result correction, GB/T 21163.1 listed phase the formula should be amended, and through a series of forms in this section has been amended, the table in this section lists each of the correction factor.

This section provides a method for determining the rate of water evaporation drying equipment during the test is in a steady state, or to the dry wheat He cereals this method is feasible. This section also measured performance results to other materials correction method under standard environmental conditions described in the doing.

Determination of agriculture grain dryer performance Part 2. Additional procedures and crop - specific requirements

1 Scope

This section provides continuous and batch-type grain dryer grain dryers for specific grains, including wheat, barley, oats, corn, rice, Additional procedures sorghum and rapeseed and

other drying performance test and evaluation and operational guidelines. This part of GB/T 21163.1 complement the general method Charge. The general method is based on dried wheat as the basic raw material and defines a wet basis moisture content in the range of 20% to 15%.

Objective methods and parameters are specified.

a) Determination of grain dryers in drying water evaporation rate under steady state conditions.

When the main performance parameters b) reference standards and other environmental factors, including the amendment of the dryer water evaporation rate, grain flow, dried Room and unit energy consumption and fuel consumption.

Regulations also expected out of the sampling method has been described, in order to evaluate the quality of the grain change.

2 Normative references

The following documents contain provisions which, through reference GB/T 21163 in this section constitute provisions of this section. For dated references, all subsequent amendments (excluding corrections) or revisions do not apply to this section, however, encourage an agreement under this section Parties to study the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 21163.1-2007 Determination of drying performance of agricultural grain dryers - Part 1. General

3 Terms and Definitions

GB/T 21163.1 identified and the following terms and definitions apply to this section.

Dryer results corrected reference conditions ambient temperature, relative humidity and ambient atmospheric pressure.

Per unit time per unit volume of grain flowing through the volume of gas (i.e., the amount of change per unit time of the gas).

NOTE: There are several express air flow method, but comparatively speaking, different for different dryers and grain, the most suitable for this method.

Cereals and hot air contact time.

Cold cereal and contact time.

In this process, to a certain degree of drying grain is not ventilated, temporary storage for several hours, so that tends to balance grain moisture, causing internal stress Crack least.

NOTE: When dry rice, the usual practice is to dry the rice to cool to ambient temperature higher

than 2 °C, then tempering at least more than 4h. General To One or drying times, gentle Sue cooling process.