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

GB/T 46673-2025

Grain and oil machinery - Desolventizer towers

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the National Food and Strategic Reserves Administration. This document is under the jurisdiction of the National Technical Committee on Standardization of Grain and Oil (SAC/TC 270). This document was drafted by: COFCO Engineering Technology (Xi'an) International Engineering Co., Ltd., Shandong Kaisida Machinery Manufacturing Co., Ltd., and COFCO Engineering Equipment. Beinanpi Co., Ltd., Xinjiang Agricultural Development Group Co., Ltd. The main drafters of this document are. Yang Fan, Du Xuanli, Wei Bing, Cheng Jie, Lin Fengyan, Zhang Lijun, Zhang Ruiyang, Lu Hailong, and Wu Kuanglei. Grain and oil machinery desolventizing tower

1 Scope

GB/T 46673-2025 is the Chinese national standard covering the desolventizer-toaster that strips hexane out of the extracted meal - the trays and the steam, the residual solvent that has to be brought low enough for the meal to be fed to animals, and the explosion protection around a hexane process. First edition, with GB/T 46672-2025 on bleaching towers. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document defines the terminology and definitions for grain and oil machinery desolventizing towers, outlines their working principles and basic parameters, and specifies technical requirements and inspection procedures. The regulations cover testing rules, marking, packaging, transportation, and storage requirements, and describe the corresponding testing methods. This document applies to tower-type equipment used in vegetable oil plants for the continuous removal of residual solvents from crude oil.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 150.3 Pressure Vessels - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 8873 and the following terms and definitions apply to this document.

3.1 desolventization The process of removing solvent from crude oil by steam distillation at a certain temperature and under vacuum.

3.2 desolventizer tower A tower-type device used for leaching crude oil to remove residual solvents.

4. Working Principle Under specific temperature and vacuum conditions, crude oil is sprayed from the top of the desolventizing tower, where it comes into full contact with steam at a certain pressure.

4 Manufacturing, Inspection and Acceptance

GB/T 191 Packaging and Storage Graphic Symbols

GB 5009.236 National Food Safety Standard - Determination of Moisture and Volatile Matter in Animal and Vegetable Oils

GB/T 8873 Terminology for Grain and Oil Products - Oil Industry GB/T 13306 Nameplates

GB/T 24854 General Technical Requirements for Packaging of Grain and Oil Machinery Products

GB/T 24855 General Technical Requirements for the Assembly of Grain and Oil Machinery

GB/T 24857 General Technical Conditions for Plate Parts and Plate-Shaped Steel Components of Grain and Oil Machinery

GB/T 25218 General Technical Requirements for Coating of Grain and Oil Machinery Products

GB 50264 Code for Design of Thermal Insulation Engineering for Industrial Equipment and Piping GBZ 158 Occupational Hazard Warning Signs in the Workplace NB/T 47013 (All Parts) Non-destructive Testing of Pressure Equipment SBJ 04-

91 Fire Safety Standards for Leaching Oil Processing Plants

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