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PEOPLE'S REPUBLIC OF CHINA**

GB 25492-2010

Shakeout - Safety requirements

落砂机 安全要求

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Foreword

All the technical contents of this standard is mandatory. The standard proposed by China Machinery Industry Federation. This standard by the National Foundry Machinery Standardization Technical Committee (SAC/TC186) centralized. This standard was drafted. The Zimmer Jinan Forging Machinery Co., Ltd., Jinan Foundry and Metalforming Machinery Research Institute. The main drafters of this standard. Tianyong Heng, Lu Jun, Zhan Changjun. Shakeout machine safety requirements

1 Scope

GB 25492-2010 is the Chinese national standard on shakeout - safety requirements, in the field of manufacturing engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to

be lawfully made, sold or carried out in China. It was issued on 1 December 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2011. Classification: ICS 25.120.30, CCS J61. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies SHAKERS designers, manufacturers and suppliers, and users should follow the safety requirements and measures. This standard applies to stationary inertia SHAKERS, transport inertial SHAKERS (hereinafter referred to as the shakeout machine), impact inertial vibration Shakeout machine and eccentric SHAKERS may also refer to the implementation of this standard. This standard also applies to equipment constituting the shakeout machine assembly units and auxiliary equipment.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 3098.1-2000 Mechanical properties of fasteners Bolts, screws and studs (idt ISO 898-1.1999)

GB 5083 production equipment with safety and health General

GB 5226.1 mechanical and electrical safety of machinery - Electrical equipment - Part 1. General requirements (GB 5226.1-2008, IEC 60204-1.2005, IDT)

GB/T 9969 General Instructions industrial products

GB 23821 Safety of machinery - Safety distances to prevent danger zones being reached on the lower limbs (GB 23821-2009, ISO 13857.2008, IDT)

GB 12265.3 Safety of machinery to avoid crushing of parts of the human body minimum spacing (

GB 12265.3-1997, eqvEN349. 1993)

GB/T 14776 Ergonomic design principles job size and value

GB/T 15706.1 Safety of machinery - Basic concepts, general principles for design - Part 1. Basic terminology and methods (GB/T 15706.1- 2007, ISO 12100-1.2003, IDT)

GB/T 15706.2-2007 Safety of machinery - Basic concepts, general principles for design - Part 2. Technical principles (

ISO 12100-2. 2003, IDT) Ergonomic principles

GB/T 16251 design of work systems (GB/T 16251-2008, ISO 6385.2004, IDT)

GB 16754 Safety of machinery - Emergency stop design principles (GB 16754-1997, eqvISO / IEC 13850.1995)

3 Important risk projects

3.1 General The following items are important risk according to the provisions of GB/T 16856, and to the shakeout machine within the scope of this standard of risk assessment.

3.2 Mechanical hazards

3.2.1 shakeout machine operation, which may cause moving parts to persons pinching, shearing, collision, winding and dangerous.

3.2.2 shakeout machine parts due to the form factor, its sharp edges, corners may be cut or stabbed on the person causing danger. Possible danger

3.2.3 shakeout machine parts during use due to loose, loose, broken or dropped, broken, thrown like.

3.2.4 crawl or take the work hanging in the shakeout machine, due to the emphasis on the workpiece slide, spreader strong enough tipping accidents and other causes, shift Moving or falling hazard.

3.2.5 shakeout machine four weeks may cause slipping, tripping hazard. Maintenance personnel to operate or operating narrow space collision may suffer inconvenience Pinched and dangerous.

3.3 Electrical Hazards

3.3.1 direct contact with exposed energized parts or insulation failure of live wires or components may cause electric shock, fire, burns, falls And dangerous.

3.3.2 Control component failure hazard caused by incorrect operation.

3.3.3 The two vibrating motor shakeout machine due to the power supply wiring error caused by a co-rotating and cause dangerous damage to the equipment.

3.4 Thermal hazards

3.4.1 due to high temperatures and sand casting off the sand in the process may result in burns, burns and other dangers.

3.4.2 Since the shakeout machine work continuously at high temperatures, causing the body temperature may result in burns, burns and other dangers.

3.5 noise hazard Due but not limited to the following causes of the shakeout machine noise is too large, resulting in hearing loss, tinnitus, fatigue after long operator work fine God repression and interference auditory danger signals;

--- Unbalance exciter operation;

--- Castings and the like Riser and grid plate collision.

3.6 hazardous materials and substances produced

3.6.1 shakeout machine dust generated during use may pose an aspiration hazard to humans.

3.6.2 fire or explosion hazard of dust produced by the manufacturer.

3.7 Other hazards

3.7.1 By ignoring the risk of ergonomic principles of ergonomics can cause, such as the operating direction is easy to produce errors, inappropriate lighting, too tight Zhang and fatigue.

3.7.2 loading, during transport, much weight, poor stability, components are not fixed, strong enough spreader tipping accidents and other causes, shift Moving or falling hazard.

4.1 Basic requirements

4.1.1 shakeout machine should minimize the risk by design, it intrinsically safe. Can not be properly or fully avoided by design Risk limits should be used security guards to protect the operator.

4.1.2 shakeout machine safety design should be consistent with GB/T 15706.1, GB/T 15706.2 and GB 5083 regulations.

4.1.3 Security sand off the machine shall comply with the provisions of this standard, it should also comply with the relevant provisions of GB 20905.

4.1.4 Control system components related to the safety and security requirements should be designed to comply with the relevant provisions of GB/T 16855.1 of.

4.1.5 shakeout machine should be designed to fully reflect ergonomic principles, and should be consistent with GB/T 14776, GB/T 16251 and other relevant standard Registration requirements.

4.1.6 Who can not be eliminated by design or sufficiently reduced, and its security guards are not completely effective or ineffective legacy wind Insurance, should be through the use of user information notification and warning devices. Use of information is an integral part of