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自动分拣设备采购合同范本

Purchase Contract Template for Automatic
Sorting Equipment

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前 言

Foreword

本标准按照GB/1.1-2009给出的规则起草。

This standard is drafted according to the rules stipulated in GB/1.1-2009.

本标准由上海市工商联国际物流商会提出。

This standard is put forward by SFIC International Logistics Chamber of Commerce.

本标准由上海市工商联国际物流商会归口。

This standard is managed by SFIC International Logistics Chamber of Commerce.

本标准起草单位：上海市工商联国际物流商会、圆通速递有限公司。

This standard is drafted by: SFIC International Logistics Chamber of Commerce, YTO Express Co., Ltd.

本标准主要起草人：邵钟林、相峰、郑春雷、胡斌、孙建英。

This standard is mainly drafted by: Shao Zhonglin, Xiang Feng, Zheng Chunlei, Hu Bin, Sun Jianying.

本标准英文翻译人：蔡熙、吴鸿杰。

This standard is translated in English by: Cai Xi, Wu Hongjie.

本标准英文翻译审校人：蔡绍源。

This standard English translation proofreading by: Cai Shaoyuan.

本标准首批执行单位：

This standard is firstly implemented by:

- 1、上海市杭州商会 Hangzhou Chamber of Commerce in Shanghai
- 2、上海德马物流技术有限公司 Shanghai Damon Logistic Technology Co., Ltd.
- 3、苏州金峰物流设备有限公司 Suzhou Ginfon Logistics Equipment Co., Ltd.
- 4、浙江朗奥物流科技有限公司 Zhejiang Lang'ao Logistics Technology Co., Ltd.
- 5、苏州韩铭金属制品有限公司 Suzhou Hanming Metal Products Co., Ltd.
- 6、金华易达物流设备有限公司 Jinhua Yida Logistics Equipment Co., Ltd.
- 7、苏州蕙测机电有限公司 Suzhou Huice Electromechanical Co., Ltd.
- 8、极昊供应链（上海）有限公司 Extreme Supply Chain (Shanghai) Co., Ltd.
- 9、上海浩创巨永科技有限公司 Shanghai Haochuang Genyong Technology Co., Ltd.
- 10、广东泽业科技有限公司 Guangdong Zeye Technology Co., Ltd.
- 11、上海凯拿金云科技有限公司 Shanghai Cana Jinyun Technology Co., Ltd.
- 12、上海运力集装箱服务股份有限公司 Shanghai CapEx Container Services Co., Ltd.
- 13、上海晋越国际货运代理有限公司 Shanghai Jinyue International Freight Forwarder Co., Ltd.
- 14、江苏浩智智能科技有限公司 Jiangsu Haozhi Intelligent Technology Co., Ltd.
- 15、江苏业神物流设备有限公司 Jiangsu Yesen Logistics Equipment Co., Ltd.
- 16、上海号智智能科技有限公司 Shanghai Haozhi Intelligent Technology Co., Ltd.
- 17、上海精科管理咨询合伙企业（有限合伙）
Shanghai Jingke Management Consulting Partnership (Limited Partnership)
- 18、上海广方商贸有限公司 Shanghai Guangfang Trade Co., Ltd.

自动分拣设备采购合同范本

Purchase Contract Template for Automatic Sorting Equipment

1 范围 Scope

本标准给出了自动分拣设备采购合同的基本要求、构成、条款设置及设备技术要求等内容。

This standard provides the basic requirements, composition and terms of the purchase contract for automatic sorting equipment as well as the technical requirements of the equipment.

本标准适用于邮政快递行业采购自动化分拣设备，制定合同以约定甲乙双方的权利和义务。鼓励制造商生产自动分拣设备时遵照使用。

This standard is applicable to the postal express service industry to purchase the automatic sorting equipment and formulate the contract so as to agree on the rights and obligations of Party A and Party B. The manufacturer/vendors are encouraged to comply this standard when producing the automatic sorting equipment.

2 规范性引用文件 Normative References

下列文件对于本文件的应用是必不可少的。凡是注日期的引用文件，仅所注日期的版本适用于本文件。凡是不注日期的引用文件，其最新版本（包括所有的修改单）适用于本文件。

The following documents are indispensable to the application of this document. For dated references, only the dated versions apply to this document. For undated references, the latest versions (including all amendments) apply.

GB/T 18354-2006 物流术语

GB/T 18354-2006 Logistics Terms

GB/T 27917.1-2011 快递服务 第1部分：基本术语

GB/T 27917.1-2011 Express service – Part 1: Basic terminology

WB/T 1041-2012 自动分拣设备管理要求

WB/T 1041-2012 Management requirement of automatic sorting equipment

3 术语和定义 Terms and Definitions

下列术语和定义适用于本文件。

The following terms and definitions apply to this document.

3.1

自动分拣设备 Automatic Sorting Equipment

能够通过识别系统识别物品ID（identity）属性，并能据此对物品进行分类重组传输的自动系统，主要由传输供件装置，识别系统、控制系统、机械分拣机构及信息处理系统组成。

An automatic system is capable of recognizing the ID (identity) attributes of items through the recognition system and thereafter classifying, regrouping and conveying the items, mainly consist of conveying inducting device, recognition system, control system, mechanical sorting system and information processing system.

[WB/T 1041-2012, 定义2.1]

[WB/T 1041-2012, Definition 2.1]

3.2

条码 Barcode

由一组规则排列的条、空及其对应字符组成的标记，用以表示一定的信息。

A mark consist of a set of regularly arranged bars, blanks and corresponding characters, which is used to represent certain information.

[GB/T 18354-2006, 定义6.3]

[GB/T 18354-2006, Definition 6.3]

3.3

二维码 Two-dimensional Code

在二维方向上都表示信息的条码符号。

A bar code symbol standing for information in two-dimensional directions.

[GB/T 18354-2006, 定义6.4]

[GB/T 18354-2006, Definition 6.4]

3.4

当事方 Party

签订合同主体的双方，包括甲方与乙方，也包括与双方相关的第三方。

Both parties signing the contract, including Party A and Party B as well as the third party related to both parties.

3.5

技术资料 Technical Information

本合同约定需由乙方向甲方提供的关于合同设备的设计、制造、检验、安装、调试、试运行、验收、操作以及维护维修等有关的技术指标、规格、图纸和文件，以及在相关实施阶段中需由乙方制作提供的其它资料。

Technical indexes, specifications, drawings and documents related to the design, manufacturing, inspection, installation, commissioning, trial run, acceptance, operation and maintenance of the contract equipment which shall be provided by Party B to Party A as agreed herein in the contract, as well as other information formulated and provided by Party B during relevant implementation stage.

3.6

安装 Installation

乙方按照合同约定及国家、行业、地方等相关技术要求、规范对设备所进行的装配、就位和连接等工作。

Assembly, positioning, connection and other work of the equipment undertaken by Party B according to contractual stipulations, relevant national, industrial, local and other technical requirements, specifications.

3.7

调试 Commissioning

在合同设备安装完毕后乙方为保证合同设备正常运行在甲方及监理方监督下按照合同约定及国家、行业、地方等相关技术要求、规范所进行的测试和调整。

Test and commissioning are conducted by Party B according to contractual stipulations, relevant national, industrial, local and other technical requirements, specifications under the supervision of Party A and the supervisor after the installation of the contract equipment in order to ensure the qualified functionality of contract equipment.

3.8

试运行 Trial Run

在合同设备调试后，对设备进行三个月的系统负荷运行。

Equipment needs operate with systematical load for three months, after the commissioning of the contract equipment.

3.9

验收 Acceptance

在经初验设备完成试运行后，对设备质量是否符合合同约定及系统整体是否达到规划设计的功能和处理能力所进行的技术性能和保证指标的评估和论证，验收是否合格以双方是否签署《合同设备验收书》作为唯一标志。

Evaluation and verification of system performance and guaranteed indicators to confirm whether the equipment quality conforms to the contractual stipulations and whether the entire system reaches the planned and designed functions and processing capacity after the trial run of equipment upon preliminary acceptance, the signing of *Contract Equipment Acceptance Form* by both parties shall be the only approved sign of qualified acceptance.

3.10

质保期 Warranty Period

合同设备正式验收合格并经双方共同签署验收文件后，乙方为保证合同设备正常稳定使用而提供免费维修和零部件及整机更换服务的期限。

The period during which Party B will provide free maintenance service, and replacement of parts or completed machine, in order to ensure normal and stable operation of the contracted equipment after the formal acceptance of the contracted equipment, joint signing of acceptance document by both parties.

3.11

培训 Training

由乙方为保证甲方达到合同目的而向甲方相关人员提供的培训，其范围包括但不限于合同设备的安装、试运行、验收测试、操作、维护维修等。

The training provided by Party B to relevant personnel of Party A in order to ensure that Party A achieves the purpose of the contract, including but not limited to the installation, commissioning, acceptance test, operation, maintenance, etc. of the contracted equipment.

4 基本要求 Basic Requirements

4.1 自动分拣设备采购合同的订立、生效、履行、变更和转让、权利义务终止和违约责任等，应严格遵守《中华人民共和国合同法》的规定，并应遵守合同内容所涉及的我国其他有关法律、法规、规章等规范性法律文件。

The conclusion, effectiveness, performance, change, transfer, termination of rights and obligations, liability for breach of contract and others of the purchase contract for automatic sorting equipment shall be in strict accordance with the *Contract Law of the People's Republic of China*, and the relevant national laws, regulations, rules and other normative legal documents involved in the contract.

4.2 自动分拣设备采购合同的订立应遵循平等、自愿、诚实信用、协商一致的原则，尊重社会公德，维护社会经济秩序，保护社会公共利益。

The purchase contract for automatic sorting equipment shall be concluded based on the principles of equality, voluntariness, honesty, credibility and consensus, with social morality respected, social and economic order maintained, social public interests protected.

4.3 自动分拣设备采购合同优先采用书面形式，以合同书、信件和数据电文（包括电报、电传、传真、电子数据交换和电子邮件）等可以有形地表现所载内容的形式订立，有法律特殊规定的从其规定。

The purchase contract for automatic sorting equipment shall be in the written form preferentially, and concluded in the form of contract, letter and data message (including telegraph, telex, fax, electronic data interchange and e-mail) and other forms tangibly expressing the contents contained, unless otherwise specified by special legal provisions.

4.4 自动分拣设备采购合同的签订方应建立合同和单证管理制度，加强合同评审、监控合同执行、建档保管合同文本及有关单证。

The parties to the purchase contract for automatic sorting equipment shall establish a contract and document management system, so as to enhance the contract review, monitor the contract implementation, archive and keep the contracts and relevant documents.

5 合同构成 Contract composition

5.1 基本构成 Basic constitution

自动分拣设备采购合同应包括约首部分、主文部分、约尾部分，并应包含但不限于以下内容：

The purchase contract for automatic sorting equipment shall consist of preamble, main text and end, and shall include but not limited to:

- a) 合同当事方的基本信息；
Basic information of the parties to the contract;
- b) 产品描述、数量和质量要求；
Description, quantity and quality requirements of the product;
- c) 当事方的权利和义务；
Rights and obligations of the parties;
- d) 项目关键工期节点；
Key milestones of the project schedule;
- e) 质保；

- Warranty;
- f) 变更管理机制;
Change order mechanism;
- g) 费用及结算方式;
Expenses and payment method;
- h) 不可抗力的约定;
Agreement on force majeure;
- i) 违约责任;
Liability for breach of contract;
- j) 争议的解决方式;
Dispute settlement method;
- k) 合同的生效与终止;
Effectiveness and termination of contract;
- l) 当事方签章。
Signature and seal of the parties.

5.2 约首部分 Preamble

约首部分应明确、完整的列出以下信息:

The preamble shall clearly and completely list the following information:

- a) 合同名称和合同编号;
Contract name and contract number;
- b) 合同当事方的信息, 包括但不限于名称、联系信息等;
Information of the parties to the contract, including but not limited to name, contact information, etc.;
- c) 合同中需要明确的关键术语和定义、中文或者外文缩写的指称等;
Key terms and definitions, denotation of Chinese or foreign-language abbreviations, etc. which shall be specified in the contract;
- d) 合同中涉及的订立合同的意愿和执行合同的保证的序言或总则。
Preface or general provisions regarding the intention of contract conclusion and the guarantee of contract performance involved in the contract.

5.3 主文部分 Main Content

5.3.1 基本内容 Basic contents

自动分拣设备采购合同的主文部分应该包括合同订立的目的和内容, 并涵盖合同从订立到终止全过程中合同所有当事方的权利和义务。内容应包含但不限于以下内容:

The main text of the purchase contract for automatic sorting equipment shall include the purpose and content of contract conclusion, and shall cover the rights and obligations of all parties to the contract from the conclusion to the termination of the contract. The contents shall include but not limited to:

- a) 合同标的;
Subject matter of contract;
- b) 产品的描述、数量和质量;
Description, quantity and quality of the product;
- c) 包装方式;
Packing method;
- d) 交货进度;

- Delivery schedule;
- e) 检验标准和方法;
Inspection standard and method;
- f) 安全及文明施工要求;
Requirements on safe and civilized construction;
- g) 工程质量保障及售后服务;
Project quality assurance and after-sales service;
- h) 合同价格及付款方式;
Contract price and payment method;
- i) 履行时间、地点和方式;
Performance time, location and method;
- j) 违约责任;
Liability for breach of contract;
- k) 解决争议的方式。
Dispute settlement method.

此外,自动分拣设备采购合同还可以根据需要增加例外条款、补充条款、保密条款、合同附件等。
In addition, exception clause, supplementary clause, confidentiality clause, annex to the contract and others can be added in the purchase contract for automatic sorting equipment as required.

5.3.2 产品质量要求 Product quality requirements

对于自动分拣设备的质量要求,合同应包含但不限于以下内容:

The quality requirements of the automatic sorting equipment in the contract shall include but not limited to:

- a) 有明确的技术资料,其中除设备的三大 KPI 指标,即格口准确率、条码识别率、整机分拣效率外,其他技术指标,如设备的机械性能要求、电气性能要求以及信息性能要求可在合同附件中体现;

The specific technical information shall be available, in addition to three main KPIs of the equipment, i.e. sorting accuracy, recognition rate of bar code reading and sorting efficiency of the complete machine, other technical indicators such as mechanical performance requirements, electrical performance requirements and information technology performance requirements of the equipment can be reflected in the annex to the contract.

- b) 技术标准、安装标准及验收规则由各当事方共同确认,确保技术标准、安装标准及验收规则无异议;

The technical standard, installation standard and acceptance rules shall be confirmed jointly by the parties, so as to ensure there is no objection to the technical standard, installation standard and acceptance rules.

- c) 设备生产、安装过程中,若出现具体指标变更的情况,应由各当事方共同确认,并签订书面协议;

Any change to the specific index during equipment manufacture and installation shall be confirmed jointly by the parties with a written agreement signed.

- d) 对验收可能出现的结果应事先约定处理方式,处理约定应尽可能明确不同结果下合同各当事方的责任划分、费用划分、工作内容划分等,处理约定可与违约条款合并或配合使用。

The handling method of possible result of acceptance shall be agreed in advance, the handling agreement shall specify the division of responsibilities, expenses and work scope for each party in the

case of different results as clear as possible, and the handling agreement can be used in combination or cooperation with the default clause of contract.

5.3.3 工程质量及售后 Project quality and after-sales service

对于工程质量保证及售后服务，合同应包含但不限于以下内容：

The project quality assurance and after-sales service in the contract shall include but not limited to:

- a) 应明确工程的关键节点，如可进场安装日期，初验收日期，终验收日期等；

The key milestones of the project shall be specified, such as the date of mobilization and installation, the date of preliminary acceptance, the date of final acceptance, etc.;

- b) 本工程的质保期，及质保计算起始时间；

Warranty period of the project and the starting time of warranty;

- c) 在质保期内，明确乙方在产品质量保证方面的义务，如设备维修、现场保修、故障排除、进场返修时限等，在作业高峰期可以提供驻场服务；

Specify the obligations of Party B regarding the product quality assurance within the warranty period, such as equipment maintenance, on-site warranty, troubleshooting and time limit of mobilization and site repair service can be provided in the peak time of operation.

- d) 质保期届满后，乙方应提供的技术支持、有偿维修、收费标准等。

After the warranty period expires, Party B shall provide technical support, paid maintenance service, charge standard, etc.

5.3.4 合同价款及付款方式 Contract price and payment terms

合同价款应涵盖所有产品、服务的内容，如需变更需在甲方和乙方均书面同意的条件下，以合同修订条款的形式重新约定。合同中应明确给出：

The contract price shall cover all products and services. Any change shall be re-agreed in the form of the amendment to the contract with the written consent of Party A and Party B. The contract shall clearly provide:

- a) 合同总价款，若无法明确给出合同总价款的，应给出合同总价款的计算方式；

Total contract price, or the calculation method of total contract price if the total contract price cannot be given clearly;

- b) 计价货币名称、计费单价以及费率等；

Price currency, charging unit price and rate, etc.;

- c) 费用结算方式，包括货款支付的地点、时间、条件和形式，结算凭证及其传递程序和方法等；

Expenses settlement method, including the place, time, terms and form of payment, settlement document and its transmission procedure and method, etc.;

- d) 涉及税费的，由乙方承担税费；

Taxes, if any, shall be borne by Party B;

- e) 确认收款方式；

The payment method shall be confirmed;

- f) 提供符合中国税法规定的增值税发票。

Value added tax invoice in line with the stipulations of Chinese Tax Law shall be provided.

5.3.5 违约责任 Liability for breach of contract

合同应设置违约条款，明确各当事方的违约认定、索赔等内容。违约认定包括违约行为的定义、违约认定的方法、责任划分原则、赔偿及支付约定等。索赔包括索赔额度计算、索赔程序、索赔有效期等。

The default clause shall be provided in the contract to specify the default determination and claim of each party. The default determination includes the definition of default, method of default determination, division principle of responsibility, compensation and payment agreement, etc. The claim includes the calculation of claim amount, claim procedure, validity of claim, etc.

5.3.6 不可抗力 Force majeure

为避免不可抗力的发生影响合同履行而出现纠纷，合同当事方宜对不可抗力发生时责任的免除条件及处理措施进行约定，并纳入合同条款。合同中不可抗力条款应至少明示以下内容：

In order to avoid the dispute due to the influence of force majeure on contract performance, the parties to the contract shall agree on the liability exemption conditions and handling measures when force majeure occurs and incorporate them in the contract. The force majeure clause in the contract shall at least specify the following contents:

- a) 合同当事方共同商定的、属于不可抗力的情况；
The situations mutually agreed by the parties to the contract as the force majeure;
- b) 不可抗力发生时，责任的免除约定及条件；
The agreement and condition of liability exemption when force majeure occurs;
- c) 不可抗力发生时，合同当事方应履行的义务；
The obligations to be performed by the parties to the contract when force majeure occurs;
- d) 不可抗力发生后，合同继续履行或终止的约定及条件。
The agreement and condition of continued performance or termination of the contract after force majeure occurs.

5.3.7 争议的解决方式 Dispute settlement method

合同应设置争议解决方式的条款，解决方式应至少包括：

The clause of dispute settlement method shall be provided in the contract, and the settlement method shall at least include:

- a) 各当事方协商解决；
Settlement through negotiation by both of the parties;
- b) 协商不成，可以约定向其中一方所在地有管辖权的法院诉讼解决。
If negotiation fails, it can be agreed to initiate a lawsuit to the court with jurisdiction where either party is located.

5.4 约尾部分 Ending

合同约尾部分应：

The end of the contract shall:

- a) 明确约定合同起始时间和有效时间；
Expressly agree on the starting time and effective time of the contract;
- b) 明确各当事方法定代表人及委托人签字及公章；
Specify the signature and official seal of the legal representatives and agents of the parties;
- c) 明确合同所包含的附件及法律效力；
Specify the annexes included in the contract and legal effect;
- d) 明确合同份数，签订日期和地点。
Specify the number of contract copies, signing date and place.

附录 A
(资料性附录)
自动分拣设备合同示范文本
Annex A
(Informative Annex)
Contract template Text for Automatic Sorting Equipment

本附录给出了通用性自动分拣设备采购合同的要素、样式，供设备的当事方编制合同时参考，实际合同签订中的具体结构和内容仍以合同各当事方协商约定为准。

This annex provides the elements and types of general purchase contract for automatic sorting equipment for reference by the parties of the equipment when formulating the contract. The specific structure and contents of the actually signed contract shall be subject to the agreement by the parties to the contract through negotiation.

_____ 合同
_____ Contract

合同编号: _____
Contract No.: _____

甲方: _____ 乙方: _____
 Party A: _____ Party B: _____
 地址: _____ 地址: _____
 Address: _____ Address: _____
 法定代表人: _____ 法定代表人: _____
 Legal representative: _____ Legal representative: _____
 联系人: _____ 联系人: _____
 Contact person: _____ Contact person: _____
 联系电话: _____ 联系电话: _____
 Tel. number: _____ Tel. number: _____
 传真: _____ 传真: _____
 Fax: _____ Fax: _____

第一章 定义

Chapter I Definition

- 1.1 “合同”指本商务文本的协议，及其它形成合同不可分割的附件。
 1.1 “Contract” refers to the agreement of this business text and other inseparable annexes that form the contract.
- 1.2 “技术文件或文档”指合同附件中规定的所有技术参数、设计、手册、其他专有信息以及其他与本合同软件的设计、运行、维护和检验相关的文件。
 1.2 “Technical document or archives” refers to all technical parameters, designs, manuals and other proprietary information stipulated in the annexes to the contract and other documents related to the design, operation, maintenance and inspection of the software in this contract.
- 1.3 “服务”指按合同规定提供的服务。
 1.3 “Service” refers to the services provided according to the contract.
- 1.4 “验收”指乙方在合同期限内，按照合同的要求，由甲乙双方对_____项目的批次验收。
 1.4 “Acceptance” refers to the acceptance by batches of the _____ project by Party A and Party B according to the requirements of the contract within the term of the contract.
- 1.5 “合同价格”指在原报价基础上，经双方确认的最终合同价格。
 1.5 “Contract Price” refers to the total contract price confirmed by both parties on the basis of original offer.

第二章 总则

Chapter II General provisions

2.1 甲乙双方根据《中华人民共和国合同法》及相关法律法规的规定，本着平等、互利的原则，通过友好协商，就甲方向乙方购买_____事宜达成如下协议，以资共同遵守。

2.1 According to the *Contract Law of the People's Republic of China* and relevant laws and regulations, based on the principles of equality and mutual benefit, and through friendly negotiation, Party A and Party B have reached the following agreements regarding the purchase of _____ by Party A from Party B for mutual abidance.

第三章 合同标的

Chapter III Contract object

3.1 乙方向甲方供应的产品（商品）的基本情况：

3.1 The basic information of product (commodity) provided by Party B to Party A:

产品名称 Product name	规格型号 Specification & model	数量（台） Quantity (set)

3.2 乙方保证对其依据本合同向甲方所交付的产品拥有合法的所有权、知识产权及其它权益，保证不侵犯任何第三方合法的所有权、知识产权及其它任何权益，否则，由此产生的法律责任由乙方承担。

3.2 Party B guarantees that it has legal ownership, intellectual property right and other rights and interests on the product delivered to Party A according to this contract, without infringement on the legal ownership, intellectual property right and other rights and interests of any third party. Otherwise, the legal liability arising therefrom shall be borne by Party B.

3.3 乙方保证其提供的产品及其各部件为全新的、未使用过的（有特殊规定的除外），能够充分实现、提供、具备相关产品说明中描述的功能、特点、内容和标准等。

3.3 Party B guarantees that the provided product and its parts are brand-new, unused (unless specially stipulated) and can sufficiently achieve, provide and have the functions, features, contents and standards as described in relevant product description.

3.4 乙方应遵守工程建设安全生产有关管理规定，建立完备的安全生产制度，对其工作人员进行经常性的安全教育，严格按安全标准、操作规程组织施工，并随时接受行业安全检查人员依法实施的监督检查，采取必要的安全防护措施，消除事故隐患。由于乙方施工造成的一切安全事故包括人身伤害和财产损失等均由乙方负责并承担相关费用，甲方不承担任何责任。

3.4 Party B shall abide by the management regulations related to work safety in engineering construction, establish the complete work safety system, provide regular safety education to its staff, organize the construction in strictly accordance with safety standard and operation procedures, receive the supervision and inspection by the industry safety inspector according to law at any time, and take necessary safety protection measures to eliminate the hidden peril of accident. Party B shall be liable for all safety accidents caused by its construction, including personal injury and property loss, and bear relevant costs, Party A shall not bear any responsibility.

第四章 质量要求

Chapter IV Quality Requirements

4.1 乙方必须按照甲方的技术标准（技术规范书，详见附件1）和安装工艺标准，及时向甲方提供本合同涉及的产品，甲方向乙方提供项目实施必要的办公条件、完成委托事项所需的相关数据、收货方资料。

4.1 Party B must provide the product involved herein to Party A in a timely manner according to the technical standard (technical specification, refer to Annex 1 for details) and installation process standard of Party A, and Party A shall provide Party B with the office conditions necessary for project implementation, relevant data required for completing the matter entrusted, information of recipient party.

4.2 若因乙方原因达不到甲乙双方约定的标准，乙方必须在甲方提出整改要求后的____日内调换或重新更换完毕。

4.2 In case of failure to meet the standard agreed by both parties due to the reason of Party B, Party B must complete the exchange or replacement within ____ day(s) after Party A puts forward the retrofit request.

4.3 乙方在产品制作中应严格按甲、乙双方共同确认的工艺和图纸要求进行，若出现具体指标变更的情况，应按甲方（联系单中相关部门签字）书面确认后执行。

4.3 Party B shall produce the product in strict accordance with the process and drawing requirements mutually confirmed by both parties. Any change to the specific indicator shall be implemented after the written confirmation of Party A (relevant department shall sign on the contact form).

第五章 包装方式

Chapter V Packing method

5.1 货物的包装由乙方负责，其标准按乙方所提供的设备为原厂包装，包装按有关规定执行。

5.1 Party B is responsible for the packing of goods according to relevant stipulations, the packing standard shall be subject to the original packing of the equipment provided by Party B.

5.2 乙方负责货物从乙方公司的仓库安全运输到合同指定的交货地点。

5.2 Party B is responsible for the safe transportation of goods from its warehouse to the delivery place designated in the contract.

第六章 交货及进场进度

Chapter VI Delivery and mobilization schedule

6.1 进场地址：_____（由甲方指定地点）。

6.1 Site address: _____ (to be designated by Party A).

6.2 经甲方下单给乙方后，乙方必须在____日内将所有设备及配件送到甲方指定的符合双方约定的地点，并于__前完成全部设备的安装调试且设备具备使用条件。因甲方原因造成的延误，工期顺延。

6.2 After Party A places an order with Party B, Party B must deliver all equipment and accessories to the place designated by Party A and agreed by both parties within ____ day(s), and complete the installation and commissioning of all equipment to make the equipment ready for use before __. In case of delay caused by Party A, the construction period shall be postponed accordingly.

6.3 甲方订单传达给乙方后，乙方必须在____日内盖章确认回传给甲方。

6.3 After Party A's order is sent to Party B, Party B must stamp a seal for confirmation and return it to Party A within ____ day(s).

6.4 乙方在进场前应提出细部进场方式与进度计划及安装计划与施工布局图，经甲方审核确认后实施。乙方应在合同设备进场后24小时内书面通知甲方，甲方在接到乙方书面通知后24小时内对设备点

验，并依据点验结果出具《合同设备进场证明》，该证明作为合同设备进场及其数量的标志，但乙方对已进场的产品的保管责任并不因甲方出具《合同设备进场证明》豁免，亦不代表甲方认可合同设备质量。

6.4 Before mobilization, Party B shall put forward the detailed mobilization method and schedule, installation plan and construction layout, which shall be implemented after review and confirmation of Party A. Party B shall notify Party A in writing within 24 hours after mobilization of the contract equipment, Party A shall check the equipment item by item within 24 hours after receiving the written notice from Party B and issue the *Contract Equipment Mobilization Certificate* based on the check result. The certificate serves as the mark of mobilization and quantity of the contract equipment. However, Party B's custodial responsibility of mobilized product shall not be exempted due to the *Contract Equipment Mobilization Certificate* issued by Party A, and the certificate does not represent the recognition of contract equipment quality by Party A.

6.5 安装调试过程中发现有数量短缺、规格不符等情况，乙方仍应承担补足、更换等责任。甲方发现货物短缺、包装破损、损坏或其他与合同规定不符的情况，乙方应在接到甲方通知后____日内完成补足、修理或更换相应的设备，产生的费用由乙方自行承担。

6.5 If shortage of quantity, discrepancy in specification and other situations are found during installation and commissioning, Party B shall be responsible for complementing and replacement. In case of short delivery, broken package, damage or other situations inconsistent with the provisions of the contract found by Party A, Party B shall complete the complementing, repair or replacement of relevant equipment within ____ day(s) after receiving the notice from Party A, and the expense incurred shall be borne by Party B.

6.6 安装调试完成进行初步验收，试运行____个月，期满后____个月内进行终验，若甲方没按期进行终验，且未提出书面异议的，则视为终验通过。终验通过后进入质保期，不通过则整改后再由乙方提出终验申请。设备验收可以甲方自行验收，也可以委托第三方验收。

6.6 Carry out preliminary acceptance after installation and commissioning, and conduct trial run for month(s), and carry out final acceptance within ____ month(s) after expiration. If Party A fails to carry out final acceptance on schedule and does not put forward written objection, it shall be deemed to pass the final acceptance. The warranty period begins if passing the final acceptance, otherwise retrofit shall be carried out before Party B applies for final acceptance again. The equipment acceptance can be conducted by Party A or an entrusted third party.

第七章 检验标准和方法

Chapter VII Inspection standard and method

7.1 收货验收时，若甲方发现产品的分拣效率、错分率、条码识别率、品种、型号、规格、花色等不符合要求、规定，甲方有权拒付不符合合同规定部分的货款。

7.1 During acceptance of goods received, if Party A finds that the sorting efficiency, sorting error rate, bar code reading rate, variety, model, specification, color types of products do not meet the requirements and provisions, Party A is entitled to refuse the payment for goods inconsistent with the provisions of the contract.

7.2 乙方在接到异议后，应及时响应、处理。

7.2 Party B shall timely respond and handle after receiving the objection.

7.3 甲方对产品提出异议的期限不限于乙方对产品的三包责任及按照《产品质量法》应承担的责任。

7.3 The time limit for Party A to put forward the objection against the product shall not be limited to the "three guarantees" of Party B on the product and the responsibilities to be borne according to the *Product Quality Law*.

第八章 工程质量及售后

Chapter VIII Project quality and after-sales service

8.1 本产品质保期为____年，自甲方验收合格之日起算。

8.1 The warranty period of the product is ____ year(s) starting from the date of qualified acceptance by Party A.

8.2 质保期内，乙方负责免费解决设备及其系统的所有质量问题及保养，关于易损件、人为因素损坏等问题双方可以另行约定。乙方每年至少提供____次免费上门维护回访及设备免费升级的服务。

8.2 Within the warranty period, Party B is responsible for free of charge solution of all quality problems of the equipment and its system as well as maintenance. The wearing parts, damages due to human factors and other issues shall be agreed separately by both parties. Party B shall provide at least ____ times of free on-site maintenance, return visit and equipment update every year.

8.3 售后服务____小时内响应，____小时内到达现场处理完毕。

8.3 For the after-sales service, respond within ____ hour(s) and arrive at the site within ____ hour(s) for handling.

8.4 乙方应在双方约定时期内，在甲方作业高峰期时，提供保障机制，如驻场服务。

8.4 Party B shall provide the guaranteed mechanism such as on-site service in the peak time of operation of Party A within the period agreed by both parties.

8.5 如果故障设备在____日仍无法排除的，乙方应提供不低于故障设备规格型号档次的备用设备供甲方使用，直至故障设备修复。

8.5 If the equipment fault cannot be eliminated within ____ day(s), Party B shall provide the spare equipment with the level of specification and model not lower than the faulty equipment to Party A for use until the faulty equipment is restored.

8.6 质保期届满后，乙方应保证设备正常运行，双方维保另行约定。

8.6 After the warranty period expires, Party B shall ensure the normal running of the equipment. The maintenance shall be agreed separately by both parties.

8.7 如根据本合同与附件及招标与投标文件的约定，乙方应就产品的使用、维护等对甲方及甲方员工进行培训的，乙方应在进场前向甲方提交培训计划，并经甲方认可，乙方应严格按照经甲方认可的培训计划进行培训工作。

8.7 If subject to the agreements in this contract and annexes as well as the tendering and bidding documents, Party B shall provide training on the product use and maintenance to Party A and its employees. The training plan shall be submitted by Party B to Party A before mobilization for approval by Party A. Party B shall carry out the training in strict accordance with the training plan approved by Party A.

第九章 合同价款及付款方式

Chapter IX Contract price and payment terms

9.1 合同物品单价金额请见表格所示

9.1 The unit price of the contract items is shown in the table below

名称 Name	规格 Specification	数量 Quantity	单价（元/个） Unit price (RMB/piece)	金额 Amount	备注 Remark

说明:报价含税、含运输、安装费用等。

Note: The quotation includes tax, transportation and installation fees, etc.

9.2 乙方设备安装调试完毕后,一个月内向甲方递交竣工结算报告(结算报告包括包括但不限于:清单价格、品牌工艺标准、完工决算单、施工布局图、品牌名称、合格证、偏离表、质量承诺函)。

9.2 After installation and commissioning of Party B's equipment, completion and settlement report shall be submitted to Party A within one month (the settlement report includes but not limited to price list, brand specification standard, completion and settlement sheet, construction layout, brand name, certificate of quality, deviation form and quality commitment letter).

9.3 付款方式:项目合同签订后,甲方在收到乙方开具的增值税专用发票后于____日内支付合同价格的____%预付款;甲方在拿到乙方获得的《合同设备进场证明》并收到乙方开具的增值税专用发票后于____日内支付合同价格的____%进度款;乙方调试运行后,甲方确认验收合格并收到乙方开具的余款增值税专用发票后于____日内支付至合同价格的____%;预留合同价格的____%作为质保金,确保质保期内的服务按合同要求履行,质保期满后甲方收到乙方____次免费维保单____日内支付(不计利息)。甲方应于收到上述乙方提交的材料____日后,给予乙方书面回复。

9.3 Payment terms: After signing the project contract, Party A shall pay the advance payment equal to ____% of the contract price within ____ day(s) after receiving the value-added tax invoice issued by Party B; Party A shall pay the progress payment equal to ____% of the contract price within ____ day(s) after receiving the *Contract Equipment Mobilization Certificate* obtained by Party B and the value-added tax invoice issued by Party B; After commissioning and trial run by Party B, Party A shall pay the amount equal to ____% of the contract price within ____ day(s) upon qualified acceptance and after receiving the value-added tax invoice of the balance issued by Party B; The quality guarantee deposit equal to ____% of the contract price shall be reserved so as to ensure the performance of services within the warranty period in accordance with the requirements of the contract, and the deposit (free of interest) shall be paid within ____ day(s) after the warranty period expires and Party A receives the free maintenance sheet of ____ times from Party B. Party A shall reply to Party B in writing within ____ day(s) after receiving the above materials provided by Party B.

9.4 乙方指定收款账户信息:

9.4 Information on the beneficial account designated by Party B:

账 户 名:

Account name:

开户银行:

Bank name:

账 户:

Account:

(乙方承诺账户信息如有变更,应在合同规定的付款时间基础上至少提前____日以书面方式通知甲方,如未按时通知或通知有误而影响延期付款或无法转账,甲方不承担责任)

(Party B undertakes that any change to the account information shall be notified to Party A in writing at least ____ day(s) in advance on the basis of payment time stipulated in the contract. Party A assumes no responsibility for delay in payment or inability to transfer due to failure of notification on time or wrong notification)

第十章 违约责任

Chapter X Liability for breach of contract

10.1 因乙方原因造成的工期延误,每延误一天,乙方需支付项目合同价格的____作为违约赔偿;若乙方造成工程延误的天数超过合同约定工期的三分之一,则甲方可单方面解除合同,双方按已完成的工程结算,乙方应支付项目合同价格的____违约金。

10.1 In case of delay in construction period due to the reason of Party B, Party B shall pay the liquidated damages equal to ____ of contract price of the project contract for each day delayed; if the number of days delayed in construction caused by Party B exceeds one third of the construction period agreed in the contract, Party A may cancel the contract unilaterally, and the settlement shall be made based on the progress of completed project, Party B shall pay the liquidated damages equal to ____ of contract price of the contract of project.

10.2 产品品种、规格、型号、包装、花色、质量不符合合同规定，甲方有权要求乙方整改；若经甲方书面催告，乙方未在催告期内调换的，乙方无权向甲方结算货款，并由乙方承担产品质量的违约责任。

10.2 If the product variety, specification, model, packing, color style and quality do not meet the stipulations of the contract, Party A is entitled to require rectification by Party B; if Party B fails to exchange within the notice period after the written notice from Party A, Party B has no right to claim the settlement of payment for goods against Party A and shall be liable for breach of contract for product quality.

10.3 在工程合理使用期内，由于乙方在施工时偷工减料、使用不合格材料、配件和设备，或者其他不按照工程设计图纸、施工技术标准、安全文明规范施工的行为，造成工程质量不符合规定的质量标准的，乙方除了返工、维修外，给甲方造成人身伤害、财产损失的，乙方须承担法律责任并赔偿损失。（双方也可就本条进行具体协商，另行协议约定。）

10.3 During the reasonable use period of the project, if the project quality fails to meet the specified quality standard due to Party B's cutting corners, use of non-conforming materials, accessories and equipment or other acts inconsistent with the engineering design drawings, construction technical standards, safe and civilized construction specifications, in addition to reworking and repair, Party B shall bear legal liabilities and compensate for the loss in case of personal injury and property damage incurred to Party A. (Both parties may also negotiate on this clause and agree separately.)

10.4 甲方在使用过程中发现产品有质量问题的，给甲方造成损失的，乙方应赔偿直接损失。

10.4 In case of any product quality problem found by Party A during the use which causes loss to Party A, Party B shall compensate for the direct loss.

10.5 如果甲方不能按时给乙方付款，乙方有权要求甲方支付____滞纳金/天。

10.5 If Party A fails to pay to Party B on time, Party B is entitled to require Party A to pay the overdue fine of ____/day.

10.6 乙方未按此合同第八章执行，甲方有权委托第三方进行维修或整改，所需费用由乙方承担。

10.6 If Party B fails to perform according to Chapter VIII herein, Party A is entitled to entrust a third party for repair or rectification with required costs borne by Party B.

10.7 以上乙方承担违约金甲方可在付款金额中抵扣。

10.7 The above liquidated damages borne by Party B can be deducted by Party A in the payment.

10.8 违约金的总额上限不得超过合同价款的20%。

10.8 The cap of the total amount of liquidated damages shall not exceed 20% of the contract price.

第十一章 不可抗力

Chapter XI Force majeure

11.1 当发生地震、台风、水灾、火灾、战争等不可抗力事件，发生此事件的一方应立即采取补救措施并通知对方，并且在五天内提供不可抗力的详情及将有关证明文件送交对方。

11.1 When earthquake, typhoon, flood, fire, war and other force majeure events occur, the party encountering such event shall immediately take remedial measures and notify the other party, and provide the details of the force majeure and relevant supporting documents to the other party within five days.

11.2 发生不可抗力事件时,甲乙双方应协商以寻找一个合理的解决方法,并尽一切努力减轻不可抗力产生的后果,因没有及时通知或者采取补救措施造成损失扩大的,违约方应就扩大的损失承担责任。

11.2 In case of force majeure event, both parties shall negotiate to seek a reasonable solution and exert every effort to mitigate the consequence of force majeure. If the loss is expanded due to failure of timely notice or remedial measures, the defaulting party shall be liable for the loss expanded.

11.3 如不可抗力事件持续三十天时仍不能解除,造成合同无法履行或不能全部履行,可全部或部分免除对方责任。

11.3 If the force majeure event fails to be eliminated after 30 consecutive days, causing that the contract cannot be performed in full or in part, the responsibilities of the other party can be fully or partially exempted.

第十二章 争议的解决方式

Chapter XII Dispute settlement method

12.1 合同履行发生争议时,由当事人双方协商解决。

12.1 In case of any dispute arising from the performance of the contract, both parties shall negotiate to solve it.

12.2 若协商不成,任何一方均可在_____所在地有管辖权的人民法院起诉。

12.2 If negotiation fails, either party may initiate a lawsuit to the people's court with jurisdiction where is located.

第十三章 其他

Chapter XIII Miscellaneous

13.1 方就本合同中涉及各类通知、协议等文件以及就合同发生纠纷时相关文件和法律文书送达时的送达地址及法律后果作如下约定:

13.1 The address for service of various notices, agreements and other documents involved herein, relevant documents and legal instruments delivered in case of any contract dispute, and legal consequences are agreed by both parties as follows:

(1) 双方确认其有效的送达地址为:_____。指定送达电子邮箱为_____;微信号为:_____;QQ号为_____。该送达地址和送达电子邮箱、微信号、QQ号适用范围包括为合同涉及的非诉阶段文书(包括但不限于各方的地址变更告知书、催收函、通知书等文件),以及进入仲裁、诉讼程序的相关法律文书(包括但不限于仲裁、民事诉讼程序一审、二审、再审和执行等程序中产生的各种法律文书)的送达地址。

(1) The valid address for service confirmed by both parties is: _____. The specified e-mail is _____; WeChat number: _____; QQ number _____. The scope of application of such address for service, e-mail, WeChat number and QQ number includes the address for service of instruments in the non-litigation stage involved in the contract (including but not limited to address change notice, collection letter, notification and other documents of the parties) and relevant legal instruments in the arbitration and judicial proceedings (including but not limited to various legal instruments arising from the arbitration, the first and second trials, retrial and execution of civil proceedings and other proceedings).

2、合同当事人或法院将相关法律文书送达到该地址即视为完成送达;邮寄送达的,以文书签收或退回之日视为送达之日;直接送达的,文书留在该地址之日为送达之日;电子送达的,以送达人发出文件到指定的电子邮箱、微信号、QQ号的时间为送达之日。因当事人提供或者确认的送达地址不准确、送达地址变更后未及时依程序告知对方和法院,以及当事人或指定的接收人拒绝签收等原因,导致相关文书(包括非诉阶段文书及仲裁诉讼阶段法律文书)未能被当事人实际接收的不利后果由该当事人承担。

2. When the parties to the contract or the court delivers the relevant legal instruments to such address, it shall be deemed to have been served; for a service by mail, the date of signing in or returning the instruments is the date of service; for direct service, the date of leaving the instruments at such address is the date of service; for electronic service, the time of sending the documents to the designated e-mail, WeChat number and QQ number by the sender is the date of service. The adverse consequence caused by the failure of the parties to actually receive relevant instruments (including the instruments in the non-litigation stage and legal instruments in the stage of arbitration and litigation) due to inaccurate address for service provided or confirmed by the parties, failure to timely notify the other party and the court according to the procedure after any change to the address for service, refusal to sign in by the parties or designated recipient and other reasons, shall be borne by such parties.

13.2 本合同未尽事宜，甲、乙双方可根据具体情况另行协商签订补充协议，补充协议与本合同具有同等效力。

13.2 For any matters not covered herein, both parties may negotiate separately to sign a supplementary agreement based on the specific situations. The supplementary agreement shall have the same legal effect as this contract.

13.3 本合同一式____份，甲方执____份，乙方执____份，具有同等的法律效力。本合同自双方签字盖章后生效。

13.3 This contract shall be made in _____ copies, _____ copy (copies) to be held by Party A and copy (copies) to be held by Party B with the same legal effect. This contract shall come into effective upon the signature and seal of both parties.

13.4 本合同有效期为签订合同之日起____年内有效。

13.4 This contract is valid for _____ year(s) since the date of signing.

13.5 本合同包含：附件1《技术规范书》，为本合同的有效附件，具同等法律效力。

13.5 This contract covers Annex 1 *Technical Specifications* as the valid annex of this contract with the same legal effect.

甲方（公章）：

Party A: (official seal):

法定代表人及委托人（签名）：

Legal representative and agent (signature):

日期：____年____月____日

Date:

乙方（公章）：

Party B: (official seal):

法定代表人及委托人（签名）：

Legal representative and agent (signature):

日期：____年____月____日

Date:

附件1
Annex 1技术规范书
Technical Specifications

S.1 基本要求 Basic requirements

S.1.1处理快递件规格和状态 Specifications and conditions of the parcel items to be handled
异形件不适用于本设备。

Irregular items are not applicable to this equipment.

分拣设备应能处理符合下述规格、条件的快递件为：

The sorting equipment shall be capable of handling the parcel items in line with the following specifications and conditions:

重量范围：××kg-××kg；

Weight range: ××kg-××kg；

尺寸范围：最长边≤××mm，××mm≤次长边≤××mm，最小边≥××mm。

Dimension range: The longest side ≤ ××mm, ××mm ≤ the side of secondary length ≤ ××mm, the shortest side ≥ ××mm.

(3) 分拣设备应能识别快递件上粘贴的条码并实现分拣（包含二维码，以下统称为条码），条码规格见相关文件。

(3) The sorting equipment shall be able to recognize the bar codes attached to the parcel items and realize sorting (including two-dimensional code, hereinafter collectively referred to as bar code); see related documents for the bar code specifications.

(4) 分拣设备应具有以下检测装置及功能，以确保承载单元在空载状态下供件。

(4) The sorting equipment shall be equipped with the following detection devices and functions to ensure the inducting to carriers with unloaded state.

1) 应设置有提示告警功能的灰度检测装置，用于检测承载单元是否空载及实现最薄件（1mm）的检测功能。

1) A grayscale detection device with the warning function shall be provided to check whether the carrier is unloaded and can realize the detection of the thinnest item (1mm).

2) 应设置承载单元之间是否有快递件的检测装置、功能。

2) There shall be a detection device and function to check whether there are parcel items between carriers.

3) 应设置承载单元是否已完成卸载动作的检测装置、功能。

3) There shall be a detection device and function to check whether the carrier has completed the discharging.

4) 应具有快递件重量检测动态秤装置，其功能称量范围××-××kg，分度值为××g。在满足机械供件效率的前提下，称量误差≤××g。每个称量快递件结果储存，以供查询和统计。

4) There shall be a dynamic weighing device to detect the weight of the parcel item, with a functional weighing range of ××-××kg and a resolution value of ××g. If the mechanical inducting efficiency is met, the weighing error ≤ ××g. The weighing results of each parcel item are saved for query and statistics.

5) 应具有快递件尺寸(长、宽、厚)、体积检测装置、功能，测量长度误差值≤××mm，宽度和厚度误差值≤××mm。对于任意一边长度超过××mm的快递件，体积误差不超过××%，每个检测快递件结果储存，以供查询和统计。

5) There shall be a detection device and function of the dimension (length, width, thickness) and volume of the parcel items, and measured length error ≤ ××mm, width and thickness error ≤ ××mm. For the item with the

length of any side above $\times\times$ mm, the volume error shall not be over $\times\times\%$. The detection results of each parcel item are saved for query and statistics.

6) 应具备自动检测出超规格快递件(异形件),并自动阻止其快递件供件上机分拣。超规格快递件重量、尺寸以实际检测结果不满足S.1.1(1)的要求。

6) There shall be a function to automatically detect the out-of-specification parcel item (irregular parcel item) and prevent it being inducted into the sorting machine. The weight and size of such out-of-specification item do not meet the requirements in S.1.1 (1) based on the actual detection results.

7) 最长边 $\leq\times\times$ mm、次长边 $\leq\times\times$ mm的快递件应能够用一个承载单元分拣。

7) The parcel item with the longest side $\leq\times\times$ mm and the side of secondary length $\leq\times\times$ mm shall be sorted with one carrier.

S.1.2 快递件分拣平稳性、及时性 Sorting stability and timeliness of parcel items

(1) 符合规格、条件快递件在供件及转弯环节不应出现快递件翻滚。

(1) The parcel items in line with the specified specifications and conditions shall not dump over during inducting and turning.

(2) 分拣设备应确保符合规格、条件快递件通过自动条码扫描装置后 \times 秒内能够使实物准确及时入格。

(2) The sorting equipment shall ensure that the parcel items in line with the specified specifications and conditions can discharge into related chute in an accurate and timely manner after passing through the automatic bar code scanner for \times second(s).

S.1.3 快递件分拣方式 Sorting modes of parcel items

分拣方式同时具备以下几种:

The sorting modes are as follows:

(1) 自动扫描阅读条码模式

(1) Automatic bar code scanning and reading mode

在该模式中,系统能自动识别快递件上的条码,通过条码信息在相关系统信息对应表中检索该条码快递件地址所对应的物理格口信息,并将快递件正确分拣入相应的物理格口;识别到二维码时,自动识别快递件二维码中的地址信息,通过相关系统信息对应表中检索该地址所对应的物理格口信息,并将快递件正确分拣入相应的物理格口。

In this mode, the system can automatically recognize the bar code on the parcel item, with the bar code information, search in related system information table the physical chute information corresponding to the address in such bar code and accurately sort the parcel item into corresponding physical chute; when the two-dimensional code is recognized, recognize automatically the address information in the two-dimensional code of the parcel item, search in related system information table with the physical chute information corresponding to such address and accurately sort the parcel item into corresponding physical chute.

(2) 人工扫描阅读条码模式

(2) Bar code manual scanning and reading mode

在该模式中,使用与分拣设备实时连接的手持条码扫描器识读快递件上的条码,通过条码信息在相关系统信息对应表中检索该条码快递件地址所对应的物理格口信息,并将快递件正确分拣入相应的物理格口;识别到二维码时,自动识别快递件二维码中的地址信息,通过相关系统信息对应表中检索该地址所对应的物理格口信息,并将快递件正确分拣入相应的物理格口。

In this mode, recognize the bar code on the parcel item by using a hand-held bar code scanner in real-time connection with the sorting equipment, with the bar code information, search in related system information table with the physical chute information corresponding to the address in such bar code and accurately sort the parcel item into corresponding physical chute; when the two-dimensional code is recognized, recognize automatically

the address information in the two-dimensional code of the parcel item, search in related system information table with the physical chute information corresponding to such address and accurately sort the parcel item into corresponding physical chute.

(3) 人工扫描条码并键入分拣信息模式

(3) Bar code manual scanning and sorting information Key-in mode

在该模式中, 使用与分拣设备实时连接的手持条码扫描器识读快递件上的条码, 并键入分拣信息(邮政编码、格口码、寄达局代码等), 分拣设备将扫描的条码信息和人工键入的分拣信息绑定储存, 利用键入的分拣信息将快递件分拣入相应的物理格口。

In this mode, recognize the bar code on the parcel item by using a hand-held bar code scanner in real-time connection with the sorting equipment and key-in the sorting information (postal code, chute code, code of the post office of destination, etc.), then the sorting equipment binds and saves the scanned bar code information and manually entered sorting information, and based on which, sorts the parcel item into corresponding physical chute.

上述三种分拣模式之间无需人工切换, 可实时实现所有分拣模式的混合作业。

The above three sorting modes can be combined in real time without manual switching.

(4) 人工键入分拣信息模式

(4) Manual sorting information Key-in mode

在该模式中, 分拣设备根据键入的分拣信息(邮政编码、格口码、寄达局代码等), 将快递件分拣入相应的物理格口。

In this mode, the sorting equipment sorts the parcel item into corresponding physical chute based on the entered sorting information (postal code, chute code, code of the post office of destination etc.).

(5) 视频在线补码模式

(5) On-line video coding mode

在自动条码扫描装置扫描条码无信息或拒识的情况下, 自动条码扫描装置将采集到的图像通过网络传送到视频补码台, 标码员根据图像人工键入分拣所需信息, 将快递件分拣入相应的物理格口。

When there is no information from the bar code scanning or the bar code rejects to be recognized by the automatic bar code scanner, such scanner transmits the collected images to the video coding platform through internet where the coding personnel manually key-in the required information of sorting based on the taken images and sort the parcel item into corresponding physical chute.

S.1.4 设备应适应的工作环境 Working environment to be adapted by the equipment

温度: -5°C 可正常启动, 启动十分钟内可正常运行, $5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ 可正常分拣运行

Temperature: At -5°C , turn on normally and run normally within 10 minutes of start; at $5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, run normally for sorting

相对湿度: 30%~95% (无凝露)

Relative humidity: 30%~95% (no condensation)

温度变化率 $\leq \pm 0.5^{\circ}\text{C}/\text{min}$; $\leq \pm 10^{\circ}\text{C}/\text{h}$

Temperature variance rate $\leq \pm 0.5^{\circ}\text{C}/\text{min}$; $\leq \pm 10^{\circ}\text{C}/\text{h}$

相对湿度变化率 $\leq \pm 10\%/h$

Relative humidity variance rate $\leq \pm 10\%/h$

海洋性气候(盐雾腐蚀)(沿海地区适用)

Oceanic climate (salt-spray corrosion) (applicable in coastal regions)

S.1.5 设备应适应的供电状况 Power supply to be adapted by the equipment

在下列供电条件下, 系统应能全负荷或无负荷正常运行:

In the following power supply conditions, the system shall be able to operate normally under full load or without load:

电压三相 Three-phase voltage AC 380(1±10%)V

单相 Single phase AC 220(1±10%)V

频率: Frequency: 50(1±2%)Hz

设备使用方负责提供符合国家相关规范的接地点设施, 设备提供方负责将设备接地。

The equipment user shall provide facilities at the earthing point that meet relevant national regulations and the equipment vendor shall be responsible for earthing of the equipment.

S.1.6设备的结构要求 Structural requirements of the equipment

设备应模块化, 结构合理, 相同功能的模块应具有良好的互换性, 安装、维修、扩容简便易行。各机械零部件及控制部件、电路板、插接板等均应标准化, 具有可靠的互换性。计量单位应采用中国法定计量单位。

The equipment shall be modular and with reasonable structure; the modules with same functions shall be interchangeable smoothly featured by simple and feasible installation, repair and expansion of capacity. All mechanical parts and control components, PCB, wiring board etc. shall be normalized with reliable interchangeability. The unit of measurement shall be the China legal standard.

设备零部件应选用国内或国际优质零部件。

The equipment parts and components shall be of top quality from domestic and abroad.

主控设备应选用具有世界先进水平的工控设备, 其电路板元器件、接插件均为标准化产品。

The main control equipment shall be the world leading industrial control equipment whose PCB components and connectors are standardized products.

控制柜要求结构合理, 便于操作, 接线整齐、美观、各接线点均应有标号表示, 维护方便。动力线与控制线应分槽布线。

The control cabinet shall be of reasonable structure, friendly-use operation with neat and beautiful wiring and the wiring points shall be marked accordingly for easy maintenance. The power cable and control cables shall be wired by separate ducts.

5.1.7设备的可靠性要求 Reliability requirements of the equipment

设备应满足连续工作要求, 且稳定可靠、维护简便, 应满足以下的指标:

The equipment shall be able to work continuously, stably and reliably and be maintained easily, meanwhile meeting the following indexes:

(1) 设备固有有效度A

(1) Inherent effectiveness A of the equipment

$$A = \frac{\sum_{i=1}^n t_i}{\sum_{i=1}^n (t_i + \tau_i)} \geq 99\%$$

t_i—每次故障之前的工作时间 Working time before each trouble

τ_i—每次排除故障所需的时间 Required time for each troubleshooting

注: 设备固有有效度在终验前××日内连续检测并做记录。

Note: The inherent effectiveness of the equipment is detected continuously and recorded within ×× days before the final acceptance.

(2) 设备平均连续无故障工作时间:

(2) Mean continuous time between failures of the equipment:

机械部分平均连续无故障工作时间 $\geq \times \times \times h$

Mean continuous time between failures of the mechanical part $\geq \times \times \times h$

注：测试时设备连续运转时间不少于 $\times \times$ 日，每日运行时间不少于 $\times \times$ 小时。

Note: During testing, the continuous operating time of the equipment shall be not less than $\times \times$ days, and daily running time shall be not less than $\times \times h$.

电气部分平均连续无故障工作时间 $\geq \times \times \times \times h$

Mean continuous time between failures of the electrical part $\geq \times \times \times \times h$

注：测试时设备连续运转时间不少于 $\times \times \times$ 日，每日运行时间不少于 $\times \times$ 小时，或终验前无故障视同符合规范要求，如后续有问题可按照保修条款解决。

Note: During testing, the continuous operating time of the equipment shall be not less than $\times \times \times$ days, and daily running time shall be not less than $\times \times h$; or if no trouble before final acceptance, it is deemed to comply with the specified requirements and follow the warranty provisions in case of any problem in future.

(3) 设备连续工作时间：

(3) Continuous working time of the equipment:

设备连续工作时间 $\geq \times \times h$

Continuous working time of the equipment $\geq \times \times h$

注：设备启动后负载运行 $\times \times h$ ，并进行间断式试验，设备工作应正常。

Note: After startup, the equipment runs under load for $\times \times h$ for intermittent testing and shall work normally.

(4) 控制系统连续通电时间：

(4) Continuous power-on time of the control system:

控制系统连续通电时间 $\geq \times \times h$

Continuous power-on time of the control system $\geq \times \times h$

(5) 设备整机使用寿命：

(5) Working Life time of the equipment:

设备整机使用寿命 $\geq \times \times \times \times \times h$

Working Life time of the equipment $\geq \times \times \times \times \times h$

注：每天工作 $\times \times$ 小时，使用 $\times \times$ 年。

Note: It works $\times \times h$ daily for a working life time of $\times \times$ years.

(6) 设备维修：

(6) Equipment maintenance:

更换单个易损件所需时间： $\leq \times h$

Required time for replacing individual wear part: $\leq \times h$

更换单个部件所需时间： $\leq \times h$

Required time for replacing individual component: $\leq \times h$

S.1.8 电力拖动控制系统 Electrical drive control system

(1) 应设电力拖动控制系统，控制系统应明显设有电压表、电流表、电源钥匙开关、电源开/关指示灯、启停按钮、警示装置等。

(1) There shall be an electrical drive control system provided obviously with the voltmeter, ampere meter, power key switcher, power on/off indicator, start/pause button, warning device etc.

(2) 控制系统电路具有过热、过流、短路、缺相等设备保护功能。

(2) The control system circuit is equipped with such equipment protection functions as overheat, overcurrent, short circuit and phase loss etc.

S.1.9 安全防护要求 Safety protection requirements

(1) 设备应具有可靠的安全防护措施, 系统启停、急停、满载启动可靠, 启动时应有声光告警, 10秒后启动, 平稳运行。

(1) The equipment shall be provided with reliable safety protection measures for reliable system start/pause, emergency stop and full-load start with sound-light alarm, after 10 seconds of which, the equipment starts and runs stably.

(2) 设备急停要求

(2) Emergency stop requirements of the equipment

1) 急停应优先于所有其他功能和操作。

1) Emergency stop shall precede over all other functions and operations.

2) 应该在关键、危险设备及其他可能需要急停的位置提供用于急停的设备或装置, 以确保异常情况发生时, 能及时急停。

2) The equipment or device used for emergency stop shall be provided for key and dangerous equipment as well as at any other places that may require emergency stop to ensure a timely emergency stop in case of any abnormal situation.

3) 急停区域应为整个分拣设备系统, 包括供件台及分拣主线等。

3) The emergency stop area refers to the entire sorting equipment system, including the induction and the sorting main line etc.

4) 紧急停机开关的数量及设置位置应合理, 急停装置应设在工作人员便于操作、工作时又不易误碰的位置, 具体设置在每个供件台处、封发格口处(每间隔一定的距离设置一处急停装置), 为实现急停操作, 人员从正常操作工位移动到急停装置的距离不得大于 $\times\times$ 米。

4) The quantity and location of the emergency stop switches shall be reasonable, and the emergency stop device shall be provided at a place where workers can operate easily and will not accidentally touch the device, specifically at each induction and sealing/delivering chute (one emergency stop device every certain distance); for emergency stop operation, the moving distance of workers from normal operation station to emergency stop device shall not be more than $\times\times$ m.

5) 紧急停机时应有告警指示。

5) There shall be alarm indications at emergency stop.

6) 必须由操作员在本地主动操作, 才能释放急停装置。

6) The emergency stop device may only be released with the proactive operation of the operators locally.

7) 释放急停装置后, 必须通过操作控制柜上的开关方可解除急停状态, 系统才可以按照指定的启动规程进行重启。

7) After the emergency stop device is released, the emergency stop may only be relieved by operating the switch on the control cabinet and the system will then restart according to the specified start procedures.

8) 在未解除急停状态的情况下, 禁止从远程重启设备。

8) When the emergency stop is not relieved, the equipment is prohibited to restart remotely.

9) 为防止系统处理量降低, 即使在急停的情况下, 也只能禁用直接受影响的系统部分。因此, 整个输送系统依不同区域划分成若干紧急关闭区。如果按下指定的紧急关闭按钮, 则该区域将处于急停状态。同时, 如果相邻区域处于受影响区域的范围内, 则其将部分或完全处于急停状态。

9) To prevent lowering the system's capacity, even at emergency stop, only the part directly affected is disabled. Therefore, the entire conveyor system is divided into several emergency stop areas by different area. If the designated emergency stop button is pushed, the related area will be at emergency stop. Meanwhile, if adjacent areas are in the range of the affected area, they will be at partially or completely emergency stop.

10) 设备急停按钮应具备防止误碰装置。

10) The equipment emergency stop button shall be provided with a device to prevent accident touch.

11) 监控系统能显示出紧急停机开关的位置和状态。

11) The monitoring system can display the location and status of the emergency stop switch.

(3) 当出现卡塞现象时,能自动停机并告警,应能区分主机和供件台卡塞。当系统运行中出现故障、操作出错或检测到设备物理指标异常等情况时,系统应给出声光告警提示信息;遇危险性故障时,还应有自动保护措施。

(3) In case of any jam, automatically stop and give an alarm; the jam of the sorter and induction shall be differentiated. In case of any trouble, error in operation or detection of abnormal physical indicators of the equipment during system running, the system shall give prompt information through the sound-light alarm; in case of any dangerous trouble, there shall also be automatic protection measures.

(4) 运转部分应设置防护设施。在供件台的对面应安装防护板,以防止快递件在装载过程中,从承载单元中滑落;分拣设备主线落格区域设置过渡板,且不允许有间断,起到保护承载单元的作用;在分拣设备主通道处、转弯处均需设置两层防护网,上层宽度不小于 $\times\times\text{mm}$,下层不小于 $\times\times\text{mm}$ 。格口间隙处等在下层设置防护网,宽度不小于 $\times\times\text{mm}$ 。防护网应有足够的强度,以确保操作人员和快递件的安全。防护网应便于拆装,以方便维护人员维修时进入。

(4) The moving part shall be provided with protection facilities. A protection plate shall be installed opposite to the induction to prevent parcel items slipping down from the carrier when loaded; a transition plate shall be provided in the main-line chute area of the sorting equipment without any disconnection for protecting the carrier; two layers of safety nets are provided at the main access to and curve place of the sorting equipment with the width of the upper layer not less than $\times\times\text{mm}$ and that of the lower layer not less than $\times\times\text{mm}$. For gaps between chutes and other places, provide safety nets at lower layer, with the width not less than $\times\times\text{mm}$. The safety net shall be of sufficient strength to ensure the safety of operators and parcel items. The safety net shall also be removed easily for easy access of the maintenance and personnel for maintenance.

(5) 承载单元必须有防止快递件落入分拣设备轨道中的措施。承载单元之间应装有封闭承载台,以防止快递件落入分拣设备轨道中,封闭承载台必须拆装方便,便于维护。

(5) The carrier must be provided with the measures to prevent parcel items accidentally dropping into the track of the sorting equipment. Closed bearing platforms shall be installed between carriers to prevent parcel items dropping into the track of the sorting equipment and such platforms shall be dismantled easily for maintenance convenience.

(6) 设备应无明显工艺缺陷和破损,如表面开裂、轮廓边缘粗糙、有毛刺或尖角、连接松脱、电气导线裸露等。

(6) The equipment shall be free of any obvious technological defect or damage, such as surface crack, rough edge, burr or sharp corner, loosened connection, exposed electrical conduit etc.

(7) 所有的控制柜(箱)、电缆布线及桥架等需防鼠的部位必须采取防鼠措施。

(7) All control cabinets (boxes), cable wiring and trays among other parts requiring rat-proofing must be provided with rat-proof measures.

(8) 设备应有过载、过热、过流、过压、欠压、短路、缺相、相序保护功能,电控等关键部位应具有阻燃功能。

(8) The equipment shall be provided with overload, overheat, overcurrent, overvoltage, under voltage, short circuit, default phase and phase order protection functions; electrical control and other key parts shall be provided with flame retardant function.

(9) 传送带应选用阻燃材料。

(9) Flame retardant materials shall be used for the conveyor belt.

(10) 供件平台防护参照GB 50532《民用建筑设计通则》执行,栏杆高度不应低于1.10m。并考虑防止快递件从栏杆缝隙掉落,栏杆离平台上表面0.10m高度内不宜留空,杆件净距不应大于0.25m。

(10) Induction platform protection shall follow GB 50532 *Code for Design of Civil Buildings* with the rail height not lower than 1.10m. Also consider preventing parcel items dropping off from the rail gap, no space reserved within the height of 0.10m from the rail to the upper surface of the platform, net distance between rails not more than 0.25m.

(11) 设备应有明显的安全标志。

(11) The equipment shall be provided with conspicuous safety signs.

(12) 控制开关应接入安全电压回路。

(12) The control switch shall be connected into the safety voltage circuit.

(13) 设备应具有气压过低保护功能，气压过低时自动停机。

(13) The equipment shall be provided with low air pressure protection function, thus automatically stops in case of low air pressure.

(14) 设备应设安全检修状态开关。

(14) The equipment shall be provided with the safety maintenance status switch.

(15) 当设备断电、急停、故障告警或非正常停机时，系统应保护原有数据信息不丢失（时间应不少于60分钟），恢复正常时，能接续原状态连续运行。

(15) When the equipment encounters interruption of power supply, emergency stop, trouble alarm or abnormal stop, the system shall protect the original data from losing (the time shall be not less than 60 minutes) and can continue running uninterruptedly in the original state when restoring to normal.

(16) 软件系统安全应遵循可用性、机密性、完整性、可审查性、不可抵赖性、可控性的原则。

(16) The safety of software system shall follow the principles of availability, confidentiality, integrity, auditability, non-repudiation and controllability.

(17) 软件系统应做到物理安全、网络安全、系统安全（包括操作系统、数据库、应用系统等）、采取必要的备份措施（包括主机备份、数据备份、操作系统备份等）、及采取防病毒措施。

(17) The software system shall realize physical security, network security and system security (including operating system, database, application system etc.) and take necessary backup measures (including host backup, data backup, operating system backup etc.) as well as anti-virus measures.

(18) 设备安全设计内容按GB 5083《生产设备安全卫生设计总则》执行，并在技术应答书中做出描述。信息技术设备的安全应符合GB S9S3《信息技术设备的安全》中的规定。

(18) For the contents of the equipment safety design, follow GB 5083 *General Rules for Designing the Production Facilities in Accordance with Safety and Health Requirements* and make related description in the technical contents. The safety of information technology equipment shall be in line with the regulations in GB S9S3 *Safety of Information Technology Equipment*.

S.1.10设备维护要求 Maintenance requirements of the equipment

(1) 设备必须便于维修，易损件及部件更换时间满足S.1.7中所提出的要求，常用易损件部件列表、数量及价格分拣设备提供方应在技术应答书中提出。

(1) The equipment must be maintained easily and the change time for wearing parts and components shall meet the requirements in S.1.7. The sorting equipment vendor shall put forward the list, quantity and price of the quick-wear spare parts and components in the technical proposals.

(2) 系统应配置各种常规功能的检测程序，具有自检功能，检测程序使用简单可靠。

(2) The system shall be configured with the test procedure for various general functions and provided with self-inspection function; such test procedure shall be used simply and reliably.

(3) 系统运行状态显示和记录。

(3) Display and record of system running status

应能显示系统当前的运行状态，应能实现分拣设备运行状态的监控、诊断、安全保护等。系统运行状态的记录方式可采用报表形式和磁盘文件形式。能显示现场值班人员常用的帮助、维护信息、操作要点。

The current running status of the system shall be displayed and the running status of the sorting equipment shall be under monitoring, diagnosis and safety protection etc. The running status of the system may be recorded in a report or stored in a disk file. It shall also display the helps, maintenance information and key points for operation which can be frequently used by the on-duty staff on the site.

(4) 提供通用的备品备件，互换性强，提供常用电器维护工具、专用工具及仪表。除配备各种常规工具和仪器外，分拣设备提供方还需配备专用测试仪器、安装维护工具及主要维护备件免费长期供现场使用；对较复杂的工具、备件及测试仪器，应有详细的使用说明及相关培训。分拣设备提供方应在技术应答书中明确提出。

(4) Provision of common spare parts with strong interchangeability as well as general electrical maintenance tools, special tools and instruments. In addition to the various general tools and instruments, the sorting equipment vendor shall also provide the special test instrument, installation and maintenance tools as well as major maintenance spare parts free of charge for long-term use on the site; for any complex tools, spare parts and test instruments, shall have detailed use instructions and related trainings. All of these shall be raised by the sorting equipment vendor in the technical proposal.

(5) 零部件及电控器件应组件化、模块化、标准化以便及时更换及维护。

(5) The parts and components as well as the electric control devices shall be componentized, modular and normalized for timely replacement and maintenance.

(6) 系统设备移交和保修期结束时，分拣设备提供方应提供主要的备品备件，品种及数量应在技术应答书中明确提出。

(6) At the end of handover and warranty of the system equipment, the sorting equipment vendor shall provide major spare parts with their types and quantity stated clearly in the technical proposal.

(7) 设备维护说明书应包括：维护项目说明，易损零件更换修复说明（说明中需包括各易损零件更换修复所需要的人员数量及使用的工器具），检测标准，电控系统插板图和连线图。

(7) The equipment maintenance instructions shall include maintenance items description, replacement and repair instructions for wearing parts (which shall cover the number of personnel and tools used for replacement and repair of each wearing part), test standards, electric control system plug board chart and wiring diagram.

(8) 在主机合适的地方，设置承载单元维修平台，便于设备的检查和维修。平台处设置方便挂安全绳的装置或者护栏，保证人员安全。

(8) Set up a maintenance platform for the carriers in a suitable place of the sorter for the inspection and maintenance of the equipment. At such platform, provide a device or guard rail for hanging safety rope to ensure personnel safety.

(9) 直线电机（若有）、承载单元等部件的安装，应便于维修。

(9) The linear motor (if any), carriers and other components shall be installed in such a way as convenient for maintenance.

S.1.11 设备表面处理及色彩要求 Equipment surface treatment and color requirements

(1) 设备零部件应进行表面处理。设备外表镀、涂层应光洁、牢固、耐磨、防止锈蚀，颜色和谐美观，漆面为烘漆，分拣设备提供方提供设备外观应符合分拣设备使用方色彩要求。

(1) The equipment parts and components shall be made with surface treatment. The equipment surface plating and coating shall be smooth, secure, wear-resistant and anti-rust, in beautiful color with baking paint on surface. The appearance of the equipment provided by the sorting equipment vendor shall meet the color requirements of the sorting equipment user.

(2) 机架及其他相关金属外露表面(镀锌材料与铝型材除外), 其质量均按GB6807-86标准, 若采用油漆、涂层不得低于三道(一道底漆加二道面漆)。

(2) The quality of the frame and other related metal exposed surface (excluding galvanized material and aluminum profile) shall follow GB6807-86 standard; if oil paint is used, the coating shall be not less than three courses (one course of primer and two courses of surface finish).

(3) 设备表面材料应能抗盐碱侵蚀。(沿海地区适用)

(3) The surface materials of the equipment shall be resistant to salt and alkali erosion (applicable in coastal regions)

S.1.12 电磁兼容性 Electromagnetic compatibility (EMC)

(1) 无线电干扰极限值

(1) Limits of radio interference

无线电干扰极限值应符合GB 9255 《信息技术设备的无线电骚扰限值 and 测量方法》中的A级ITE规定。

Limits of radio interference shall meet the regulations for Class A ITE in GB 9255 *Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement*.

(2) 电磁抗扰度

(2) Electromagnetic immunity (EMI)

电磁抗扰度按下列标准规定的试验要求进行, 系统设备工作应正常。

EMI shall follow the test requirements as specified in the following standards and the system equipment shall work normally.

GB/T 17626.2 电磁兼容试验和测量技术静电放电抗扰度试验

GB/T 17626.2 Electromagnetic compatibility – Testing and measurement techniques – Electrostatic discharge immunity test

GB/T 17626.3 电磁兼容试验和测量技术射频电磁场辐射抗扰度试验

GB/T 17626.3 Electromagnetic compatibility – Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test

GB/T 17626.S 电磁兼容试验和测量技术电快速瞬变脉冲群抗扰度试验

GB/T 17626.S Electromagnetic compatibility – Testing and measurement techniques – Electrical fast transient/burst immunity test

GB/T 17626.5 电磁兼容试验和测量技术浪涌(冲击)抗扰度试验

GB/T 17626.5 Electromagnetic compatibility – Testing and measurement techniques – Surge immunity test

GB/T 17626.6 电磁兼容试验和测量技术射频场感应的传导骚扰抗扰度试验

GB/T 17626.6 Electromagnetic compatibility – Testing and measurement techniques – Test of immunity to conducted disturbances, induced by radio-frequency fields

GB/T 17626.7 电磁兼容试验和测量技术供电系统及所连设备谐波、谐间波的测量和测量仪器导则

GB/T 17626.7 Electromagnetic compatibility – Testing and measurement techniques – General guide on harmonics and interharmonics measurements and instrumentation for power supply systems and equipment connected thereto

GB/T 17626.11 电磁兼容试验和测量技术电压暂降、短时中断和电压变化的抗扰度试验

GB/T 17626.11 Electromagnetic compatibility – Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

(3) 系统运行时，不应受周围电气设备频繁启动、停止的影响。

(3) During system running, the system shall not be affected by frequent start and stop of surrounding electrical equipment.

(4) 系统具有抗光干扰性能，符合相关国标或行标要求。

(4) The system has the function of anti-light interference, meeting relevant national or industrial standards.

S.1.13 接地要求 Earthing requirements

(1) 设备应有接地保护。所有计算机设备、机架、机械和电气控制（电缆槽、控制柜、二级配电箱等）部件必须接地，且必须集成在等电位连接系统中。

(1) The equipment shall be provided with earthing protection. All computer equipment, frames, mechanical and electrical control (cable trays, control cabinet, secondary distribution panels etc.) components must be earthed and integrated in the equipotential connection system.

(2) 分拣设备系统电气安全符合相关规范要求，满足设备接地要求。

(2) Electrical safety of the sorting equipment system meets related regulations and earthing requirements.

(3) 分拣设备使用方负责提供符合要求的接地点设施，设备厂家负责将系统设备接地。

(3) The sorting equipment user shall provide facilities at the earth point consistent with relevant requirements and the equipment manufacturer shall be responsible for earthing of the system equipment.

S.1.14 数据通信要求 Information Technology requirements

系统应根据分拣设备使用方要求的接口协议及内容，统一版本，统一升级,实现与网运信息系统及相关系统的双向数据通讯，满足信息实时传输和设备监控的功能需求。

The system shall have unified version and upgrade based on the interface protocol and its contents as required by the sorting equipment user for two-way data interchange with the networking information system and related systems so as to meet the functional demands of real-time information transmission and equipment monitoring.

设备应具备自检和故障自诊断功能和远程诊断、远程排障功能。

The equipment shall be equipped with functions of self-inspection, self-diagnosis and remote diagnosis of troubles, as well as remote troubleshooting.

分拣设备应该有一个数据接口规范样本。

The sorting equipment shall have a standard sample of data interface.

S.1.15 可扩展性 Extendibility

对于远期规划两套分拣设备但近期先配置一套的项目，在近期分拣设备实施时，分拣设备提供方应考虑远期分拣设备扩展的可能性和便利性。

For the project with two sets of sorting equipment planned forward and one set configured recently, when the recent sorting equipment is implemented, the sorting equipment vendor shall consider the possibility and convenience of extension of the future sorting equipment.

S.2 主要技术指标 Main technical indexes

S.2.1 分拣效率 Sorting efficiency

(1) 分拣设备主线运行速度应能实现分档运行，各档位对应的主线速度分别为： $\times\times\text{m}/\text{秒}$ 、 $\times\times\text{m}/\text{秒}$ 、 $\times\times\text{m}/\text{秒}$ 。在满足技术要求的前提下，鼓励分拣设备提供方采用更高的主线速度。

(1) The main-loop speed of the sorting equipment shall realize running by speeds and that for each speed is $\times\times\text{m}/\text{s}$, $\times\times\text{m}/\text{s}$ and $\times\times\text{m}/\text{s}$ respectively. When the technical requirements are met, the sorting equipment vendor is encouraged to adopt a higher main-loop speed.

(2) 在分拣设备主线速度为 $\times\times\text{m}/\text{秒}$ 的前提下，任意单台分拣设备机械效率（每台分拣设备每小时通过某一固定截面的承载单元数）：不小于 $\times\times$ 万件/小时。

(2) When the main-loop speed of the sorting equipment is $\times\times\text{m/s}$, mechanical efficiency of any single set of sorting equipment (the number of carrier passing through a fixed cross section per hour for each set of sorting equipment) shall be not less than $\times\times 10,000$ pieces/hour.

(3) 在分拣设备主线速度为 $\times\times\text{m/s}$ 的前提下,任意单台分拣设备单承载单元单区供包实际处理效率:不小于 $\times\times$ 万件/小时。

(3) When the main-loop speed of the sorting equipment is $\times\times\text{m/s}$, the system sorting capacity of parcels in any individual induction area by each carrier of any single set of sorting equipment shall be not less than $\times\times 0,000$ pieces/hour.

(4) 在分拣设备主线速度为 $\times\times\text{m/s}$ 的前提下,任意单台分拣设备单区供包实际处理效率:不小于 $\times\times$ 万件/小时。

(4) When the main-loop speed of the sorting equipment is $\times\times\text{m/s}$, the system sorting capacity of parcels in any individual induction area by any single set of sorting equipment shall be not less than $\times\times 10,000$ pieces/hour.

S.2.2 分拣差错率 Sorting error rate

分拣差错率 = (错分的快递件/全部上机的快递件) $\times 100\% \leq \times\times\%$

The sorting error rate = (Wrongly sorted parcel items/all parcel items on the sorting equipment) $\times 100\% \leq \times\times\%$

错分的快递件指所有入格实物与入格信息不符的快递件,包括有实物无信息及有信息无实物等情况,同一快递件不重复计算。

The wrongly sorted parcel items refer to those with the material objects in the chute inconsistent with the chute information, including the situation where there is the object material but no related information or there is related information but no material object. The same parcel item shall not be calculated repeatedly.

S.2.3 自动条码扫描装置 Automatic bar code scanner

(1) 系统应具备识别快递件上的条码及二维码的功能。

(1) The system shall have the function of recognizing the bar code and two-dimensional code on the parcel item.

(2) 自动条码扫描装置采用顶面和外侧面扫描,并预留其他几面扫描的安装位置,以提高快递件条码识读率。

(2) The automatic bar code scanner adopts top and lateral scanning, reserving the installation position for scanning of other sides to improve the bar code recognition rate of parcel items.

(3) 条码识读差错率 $\leq \times\times\%$

(3) Bar code recognition error rate $\leq \times\times\%$

(4) 条码拒识率 $\leq \times\times\%$

(4) Reject rate of bar code $\leq \times\times\%$

S.2.4 分拣快递件破损率 Damage rate of sorted parcel items

分拣快递件破损率 $\leq \times\times\%$

Damage rate of sorted parcel items $\leq \times\times\%$

S.2.5 设备噪声 Equipment noise

(1) 整机平均噪声 $\leq 70\text{dB(A)}$ 。

(1) Average noise of the entire equipment $\leq 70\text{dB(A)}$.

(2) 承载单元动作噪声 $\leq 70\text{dB(A)}$ 。

(2) Noise of the carrier movement $\leq 70\text{dB(A)}$.

(3) 最大噪声源噪声 $\leq 72\text{dB(A)}$ 。

(3) Noise of maximum noise source $\leq 72\text{dB(A)}$.

(4) 噪声测试的方法和要求应符合《包裹、印刷品、总包设备噪声测量方法》(YD/T963-1998)的规定。

(4) The noise test method and requirements shall follow provisions in *Measurement Methods of Noise for Parcel Equipment, Flat Equipment & Bag Equipment* (YD/T963-1998).

分拣设备提供方需在技术建议书中提出最大噪声点噪声及测量方法。

The sorting equipment vendor shall put forward the noise and measurement method at the maximum noise point in the technical proposal.

所有设备的支撑件或悬挂件的安装均应设置必要的减震装置，防止震动传递到建筑。

Necessary vibrations absorption devices shall be provided for installing the supporting or suspension parts of all equipment to prevent the shock transmitting to buildings.

S.2.6设备能耗 Power consumption of the equipment

分拣设备提供方应在技术应答书中详细说明设备的装机功率和实际运行功率。设备的节能、环保和人性化设计包含以下几点：

The sorting equipment vendor shall detail the installed power and actual working power of the equipment in the technical proposal. The energy saving, environmental protection and use-friendly design of the equipment includes the following contents:

(1) 设备能耗应低于国内同期同类产品，分拣设备提供方应在技术建议书中报出整机平稳运行空载和80%承载单元满载状态时的实际运行每米能耗及总能耗。每一百米主机长度能耗小于××千瓦为节能分拣设备（鼓励使用）；每一百米主机长度能耗大于××千瓦为高能耗分拣设备（不推荐使用）。

(1) The energy consumption of the equipment shall be lower than that of the domestic like product in the same period. The sorting equipment vendor shall state in the technical proposal the actual power consumption during running of one meter and the total power consumption when the entire equipment is running stably under without any load and 80% of carriers are under full load. It is an energy-saving sorting equipment (encouraged for use) if the energy consumption per one hundred meters of sorter is less than ××kW, otherwise a high energy consumption sorting equipment if exceed ××kW (not recommended).

(2) 设备所选材料和施工中所用的材料对环境无污染、无辐射。

(2) The materials selected for the equipment and those used in construction shall be pollution- and radiation-free to the environment.

(3) 设备运行中产生的噪声和辐射等，符合相应的技术标准，对人体无副作用影响。

(3) The noise and radiation etc. produced in the equipment operation meet relevant technical standards and present no side effect on human healthy.

(4) 设备的布局、结构、功能设计在满足工艺设计的要求下更应符合人性化要求，便于人的正常使用，保证人身安全。

(4) The layout, structure and functional design of the equipment shall meet the ergonomic requirement while meeting the process design requirements for normal use and personal safety of the user.