**0设备技术协议Technical Agreement**

编号No.：HTJ23228-20240313-gmanshen-23

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| **一、项目简介 Description of Project** |
| **项目名称 Project**  | 216 TEU CONTAINER VESSEL216 TEU集装箱船 |
| **船号/工程号 Hull/Project No.** | HTJ23228/29 |
| **船级社 Class**  | LR |
| **入级符号 Class Notation**  | **+100A1 Container ship，HongKong Water Service, Hatch Covers omitted in Hold(No(s)···),****+LMC, Hybrid Power.** |
| **航区** **navigation** | 内河航限 river trade limits |
| **船舶总吨 Gross Tonnage**  | 4359 |
| **船上电制 Power Supply** | 690V/380VAC/50Hz/3P 220VAC/50Hz/1P 24VDC  |
| **船旗国 Flag State**  | Hong Kong（中国香港） |
| **二、买方简介 Description of Buyers**  |
| **买方 Buyer** | 中交四航局江门航通船业有限公司 Jiangmen Hangtong Shipbuilding Co.,Ltd. of CCCC Fourth Harbor Engineering Co.,Ltd. |
| **联系人 Linkman**  | 高满燊 |
| **联系电话和电子邮箱 Tel.& Email** | 13077460120 13077460120@163.com |
| **签名和日期 Signature and date** |  |
| **三、卖方简介 Description of Seller** |
| **卖方 Seller**  |  |
| **联系人 Linkman**  |  |
| **联系电话和电子邮箱 Tel.& Email** |  |
| **签名和日期 Signature and date** |  |
| **四、设备简介 Description of Equipment** |
| **设备名称 Equipment**  | 空气干燥器 |
| **设备品牌和原产地 Brand/ Origin**  |  |
| **设备数量 Quantity**  | 1船套 |
| **卖方性质Seller category**  | ☑ 制造商Manufacturer  □ 系统集成商Systems Integrators □ 代理商 Agent |

**A、技术通则General Technical Requirement**

**一．总则 General**

1. 设备应符合合同生效时最新的 **LR** 船级社规范和挂旗国当局要求，包括修正案。The Equipment shall comply with the latest rules and regulations of classification society **LR** and flag state, including amendments thereto being in effect as of the signing date of the Contract, if applicable to the Vessel.
2. 该船的机械和设备系统在下述环境能正常运行： The Vessels machinery and equipment systems are working normally for the following environmental conditions:

• 海水温度 sea water temperature: 0℃-32℃

• 淡水温度 fresh water temperature: 0℃-36℃

• 室外空气温度 ambient outdoor air temperature: 45°，90%RH

• 室内空气温度 ambient indoor air temperature: 45°，90%RH

1. 设备应能在海上环境（潮湿空气、盐雾、油雾、霉菌等）、船舶正常营运中产生的振动和冲击下正常使用及存放。The equipment can be normally used and stored under marine environment（humid air, salt fog, oil mist, mold，etc）,vibration and impact generated during normal operation of the ship.
2. 设备应满足船级社对于船舶倾斜角（横倾、横摇、纵倾、纵摇）的要求。The equipment shall comply with the inclination angle(list, roll,trim,pitch) of ship according to the Class require.

**二.通用要求 General Requirements**

1. 所有零、部件和仪器、仪表的计量采用国际标准计量单位。All components, instruments and meters shall be adopted international standard units.
2. 除非另有说明，材料和制造工艺、产品设计、最终成品，符合相关行业及国际标准(ISO,IEC,etc)和规范，并适于船用。Materials and manufacturing process, product designg,are according to relevant industrial practice, international standards and specifications, and to be suitable for marine, unless otherwise mentioned.
3. 每套设备应在明显位置装有铭牌，包括设备名称，型号和制造商等信息，铭牌为繁体中英文，除非特别说明，材质为铜质或不锈钢（或按厂家标准）。Each set of equipment is to be fitted with a nameplate in notable place with equipment name, model No and the name of manufacturer, etc. The language of nameplate is Traditional Chinese and English, unless otherwise mentioned, material to be bronze or stainless steel(or Manufacturer standard).
4. 所有露天接线盒填料函及所有电机填料函需为金属填料函(钢质或铜质)，不能采用尼龙材料。 All the outdoor junction box and all the motor junction box panel cable glands should be metal material (steel or brass).Nylon is not acceptable.
5. 所有电气控制箱内必须附带工作图纸。All electric control boxes should c/w as build control diagram drawing.
6. 设备所有管路接口需提供配对法兰或配对接头。All the counter flanges or counter connection should be supplied.
7. 设备表面要做保护处理。设备油漆颜色应由买方确认。The surface shall be protected.Paint colour is to be confirmed by the Buyer.
8. 卖方必须按照规范和规则以及制造商标准提供备品备件及工具，并须在协议中列出清单。The Seller should supply the spare parts & tools according to Rules and Regulations，manufacturer’s standard, and attached the list in this agreement.

**三.技术资料的要求 Requirements for** **Technical Documents**

1. 船级社要求提交的有关设备图纸由 **制造商** 负责设计，由 **制造商** 负责送审船级社并封闭船级社提出的意见。**The manufacturer** is responsible for the design drawings required by the classification society, and **the manufacturer** is responsible for submitting these drawings to classification society and closing the comments from classification society.
2. 技术文件用语 Language for Technical Documents

□**英语 English** ☑**繁体中文和英文 traditional Chinese & English** □**中文 Chinese**

1. 卖方必须及时提供买方要求的设备相关图纸或相关技术文件，包括设备外形图和原理图。制造过程中若有必需的修改，卖方应立即联系并获得买方同意，并且提交修改标记和注解说明。图纸应与提供的设备相符。The Seller must submit the drawings and/or document as required by the Buyer, including the outline drawing and schematic diagram. If there are necessary modifications during the manufacturing process, the seller should immediately contact and obtain the buyer’s consent, and submit the modification marks and comments. The drawing is to coincide with the provided equipment.
2. 图纸的认可：合同签订后 **7** 个工作日内， **1** 份电子版和**2**份纸质版资料应递送至买方。Approval drawings： **1** set soft copy and **2** hard copy approval drawings shall be sent to the Buyer within **7** working days from the Contract signing date。
3. 完工图纸：交货 **15** 个工作日内， **6** 套纸质版 + **1**张U盘递送至买方。 The final drawings: **6** sets hard copy files + **1** USB flash disc final drawings and manuals shall be sent to the Buyer, within **15** working days after delivery equipment.
4. 技术文件的具体内容，应包括但不限于安装手册、操作说明、维护手册、技术和试验报告、外形图、管路原理图、电气原理图、电气接线图、液压原理图、备品备件清单、设备元器件部件号等。The specific content of the technical documents shall include but not limited to installation manuals, operating instructions, maintenance manuals, technical and test reports, outline drawings, piping schematic diagrams, electrical schematic diagrams, electrical wiring diagrams, hydraulic schematic diagrams, spare parts list , Equipment component part number,etc.

**四.声明和证书 Statement and certificate for Equipment**

1. 卖方须提供设备和所有部件的以下有关支持性文件，文件格式符合有关规范规则。The Seller should provide the following supporting documents for the equipment and all parts. The format of documents meets the relevant rules and regulations.

■**(1）****无石棉声明（100%不含石棉的成分）Declaration of Asbestos-free(100% free of asbestos).**

□**(2)材料声明和供应商符合声明（ MD，Material Declaration ）&（ SDoC，Supplier Declaration of Compliance ）.**IMO MEPC.269(68)号决议:《2015年有害物质清单编制指南》 2011 guidelines for the development of the inventory of hazardous materials

1. 证书要求：（1正 + 2副)/船 (one original + two copy)/（one ship), as per classification standard

证书类型Type of Certification:

■ **具体参见技术协议 Refer to TA.**

■ **制造厂证书 Manufacture Certification**

□ **LR 型式认可证书或其他 LR Type Approval Certification or others**

□ **LR船用产品证书** **LR Individual Unit Certification**

**五.其他 Miscellaneous**

1. 工厂验收测试前，卖方应通知买方参加测试并提交相关的检验或测试项目。Prior to factory acceptance test, The SELLER should inform the BUYER to attend the test and at the same time submit the inspection/test information.
2. 售前和售后的服务（技术和保修）由 **制造商** 提供。调试工作由 **制造商** 提供。具体服务调试期限由商务合同确定。Pre-sales and after-sales service (technical and warranty service) provided by **the Manufacturer.** The commissioning job of the equipment will be done by **the Manufacturer.** The specific service period shall according to business contract.
3. 质量保证期为交船后一年。
4. 本协议语言为中英文，以下列语言为准. The language of this agreement is Chinese and English, and the following languages shall prevail.

□**英语 English** ■**中文 Chinese**

1. 待商务合同生效后，本协议才能生效。This agreement shall become effective on the date when the business contract has been duly executed.
2. 本协议未尽事宜，各方友好协商解决。If there are matters not covered in this specification, we would consult friendly.

**B、技术要求Technical** **Requirement**

**（一）注意事项Precautions**

**1.卖方应认真阅读买方发出的询价文件中，所有的事项、格式、条款和规范等要求。The Seller shall carefully read all matters, forms, terms and specifications and other requirements in the inquiry documents issued by the Buyer.**

**2.卖方的报价范围，应是询价文件中指定项目的全部内容，包括可选项。The scope of the seller's offer shall be the full content of the items specified in the inquiry documents, including optional.**

**3.卖方提交的报价文件，属于下列情况之一的，均被认定为不响应买方要求，买方有权作出相应处理（包括废标），由此产生的后果由卖方承担。The** **quotation documents submitted by the seller, which belong to one of the following situations, are considered as not responding to the buyer's requirements, and the buyer has the right to make the corresponding processing (including rejection), and the consequences arising therefrom shall be borne by the seller.**

**1）不能响应 “基本要求”的；Do not respond to required in the "basic requirements".**

**2）投标时作出虚假承诺，在签订合同时，以各种理由推诿不予承认，或者加价的；Make false promises at the time of bidding, and at the time of signing the contract, deny it for various reasons, or increase the price.**

**3）不提供基本原理图、流程图和外形图（可以接受初步图或参考图，但是不能缺漏）的；Do not provide basic schematics, flowcharts and outline drawings (preliminary drawings or reference drawings are acceptable, but not missing).**

**4）不提供设备主要和关键部件的设备品牌的；Do not provide the brands of the main and key components of the equipment.**

**5）不提供设备供货范围（包括随机备件、标准及专用工具）的；Do not provide the scope of supply of equipment (including spare parts,** **standard and special tools).**

**（二）详细要求Detailed Requirement**

**卖方应提交详细技术协议，至少包含以下基本内容，由卖方填写。The seller shall submit a detailed technical agreement containing at least the following basic elements to be completed by the seller**

**1.引用的规范和标准 Referenced regulations and standards**

本项目所采购的设备、材料，必须符合国家、行业颁布的最新的条例、规范、标准、施工准则和业务条例。包括但不限于以下：The equipment and materials procured for this project must comply with the latest regulations, codes, standards, construction guidelines and business regulations promulgated by the state and industry. This includes, but is not limited to, the following:

1. Rules and Regulations for the Classification of Ships, July 2023(LR)
2. Hong Kong Marine Department 《 Merchant Shipping(Local Vessels) (Certification and Licensing) Regulations》(Cap.548 sub.leg.D)
3. Hong Kong Marine Department《MERCHANT SHIPPING(LOCAL VESSELS) (TYPHOON SHELTERS) REGULATIONS》 (Cap.548 sub.leg.E)
4. Hong Kong Marine Department《MERCHANT SHIPPING(LOCAL VESSELS) (GENERAL) REGULATIONS》(Cap.548 sub.leg.F)
5. Hong Kong Marine Department《MERCHANT SHIPPING(LOCAL VESSELS) (SAFETY AND SURVEY) REGULATIONS》(Cap.548 sub.leg.G)
6. Hong Kong Marine Department《MERCHANT SHIPPING(LOCAL VESSELS) (WORKS) REGULATIONS》(Cap.548 sub.leg.I)
7. Hong Kong Marine Department《Merchant Shipping (Prevention of Oil Pollution) Regulations》 (Cap.413 sub.leg.A)
8. Hong Kong Marine Department《MERCHANT SHIPPING (CONTROL OF POLLUTION BY NOXIOUS LIQUID SUBSTANCES IN BULK) REGULATIONS》(Cap.413 sub.leg.B)
9. Hong Kong Marine Department《Merchant Shipping (Control of Harmful Anti-Fouling System on Ships) Regulations》(Cap.413 sub.leg.N)
10. Hong Kong Marine Department《Merchant Shipping (Prevention of Pollution by Garbage) Regulation》(Cap.413 sub.leg.O)
11. Hong Kong Marine Department《Merchant Shipping (Prevention of Air Pollution) Regulation》 (Cap.413 sub.leg.P)
12. Hong Kong Marine Department《MERCHANT SHIPPING(SAFETY) (SIGNALS OF DISTRESS AND PREVENTION OF COLLISIONS) REGULATIONS》(Cap.369 sub.leg.N)
13. Hong Kong Marine Department《MERCHANT SHIPPING(SAFETY) (USE OF SIGNALS OF DISTRESS) REGULATIONS》(Cap.369 sub.leg.O)
14. IMO Code MEPC.159(55)
15. Any other Applicable Regulation and Rule

**2.技术参数和质量标准Technical parameters and quality standards**

**2.1 主要参数**

**型式：冷冻式**

**流量：70Nm3/h**

**功率：1kW**

**工作压力：0.8MPa**

**颗粒物≤5mg/m3**

**颗粒直径≤0.5μm**

**油≤5ppm**

**电制：1Ø,220V,50Hz**

**注：报价文件需对表中进行补充。Note: The quotation documents need to be supplemented in the table.**

**2.3 主要和关键部件的品牌Brands of the** **main and key components of the equipment**

报价文件必须对系统的主要部件的品牌/供应商，以表格的形式进行说明。

The brands/suppliers of the main and key components of the system MUST be stated in the quotation documents in the form of tables.

**3.供货范围 Scope of supply**

**3.1设备主体 Main Parts**

报价文件必须对整套系统的供货范围，以表格的形式进行说明。The scope of supply of the whole system MUST be stated in the quotation documents in the form of tables.

以下指出的设备属于必须提供的范围。The equipment indicated below falls within the scope that must be provided.

**3.2备件、标准及专用工具** **Spare parts、standard tools and special tools**

报价文件必须对备件、标准及专用工具，以表格的形式进行说明。Spare parts、standard tools and special tools MUST be described in the quotation documents in the form of tables.

**3.3调试及培训服务 Commissioning**  **and training services**

 （1）船厂内初次调试 Initial commissioning in shipyard

 （2）码头系泊试验调试 Dock mooring test and commissioning

 （3）航行试验时的功能性调试 Functional commissioning during sea trial

 （4）系统操作软件的安装指导、系统调试（作为额外选项，买方可以授权软件程序的副本给船东，用于将来进行故障排除）Installation guidance of system operating software, system commissioning (as an additional option, buyer may authorize copies of software program to shipowner for future troubleshooting).

**4.证书要求 Requirements for certificates**

■产品出厂合格证书

■无石棉声明（100%不含石棉的成分）Declaration of Asbestos-free(100% free of asbestos).

□材料声明和供应商符合声明（符合IHM要求）（ MD，Material Declaration ）&（ SDoC，Supplier Declaration of Compliance ）

■产品出厂检验报告 Product factory inspection report

■产品出厂合格证书或质量证明书 Product quality certificate

■产地来源证明 Certificate of Origin

□LR船用产品证书

**5.随机文件 File with machine**

包括但不限于：操作使用手册或说明书、维护保养说明书零件图册、维修手册、产品证书、原理图、布置图等、装箱清单、试验报告等。Including but not limited to: operation manual or instruction manual, maintenance manual part drawing, maintenance manual, product certificate, schematic diagram, layout diagram, packing list, test report, etc.