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1、 产品简介

Brief introduction

1.1 综述

Summary

LD 型(LDA、LD_{WH})电动单梁起重机（以下简称起重机）是按 JB/T1306-1994 标准设计制造的，与 CD1、MD1、WH、GD 等型式的电动葫芦配套使用，成为一种有运行轨道的轻型起重设备。其额定载荷 1t~20t，跨度 7.5m~22.5m，适应温度-25℃~+40℃，湿度≤85%，无火灾、爆炸危险和腐蚀介质的环境中工作，禁止吊运熔化金属、有毒、易燃、易爆物品。

LD model driven single beam crane (Briefly Crane) is designed and produced according to JB/T1306-1994 standard and used with model MD₁,CD₁, the motor-driven calabashes. It becomes a kind of light lifting equipment travelling on the track. Its rated load is 85%. To work in the place with out fire, dangerous exploder and the corrosive mediurns. Not allowing lifting the melted metal, poisonous, easily lighted, exploding matters.

为方便用户，设有地面和操纵室两种形式，地面操纵有手柄按钮操纵和遥控器操纵。操纵室又设有端面及侧面开门两种形式，供用户选择使用。

In order to mark things convenient for the users, there are two operating forms on the ground and in the room. Operating room with the door upper place and side door, the two kinds. Please choose.

本产品广泛用于机械制造、装配、仓库等场所。

The products widely used in machinery made, arsembled and stone houses and so on.

1.2 结构特点

Characteristic of the structure.

1.2.1 金属结构部分

The parts of the metal structure

主梁采用钢板压延成形的“U”型槽或主梁腹板及盖板为钢板拼接下料，再与工字钢组焊成箱形腹梁。横梁也是用钢板压延成“U”型槽或钢板组焊成箱形横梁。主、横梁之间采用高强螺栓连接。

The main beam is made of the steel board pressed and lengthened to be “U” shpae. Then it is welded with I-steel together to form the beam of case shape. The crossbeam is made in

the same way. For the characteristic of usage is dependable. The main beam and the cross-beam are connected in steely way and fixed with the bolts of the high strength.

1.2.2 运行机构

The travelling structure

产品是采用分别驱动形式，驱动、制动靠锥形转子制动电动机来完成，传动是采用“开 \longleftrightarrow 闭”式齿轮传动。

This crane is separately driven and braked by the tapermotor. The transmission is used “open \longleftrightarrow close” by transimission of gears.

1.2.3 电气设备

The electric equipment

本产品所用运行电机为单、双速异步锥形转子制动电动机，运行速度：地面操作一般为 20m/min、30m/min；操纵室操作为 30m/min、45m/min、60m/min、75m/min；16t 时为 20m/min、30m/min。起重机设有安全装置，可靠性高。同时可配备变频器和超载限制器等附属功能。

This crane moves with a single speed. Asynchronous motor. Travelling speed: operated on the ground 20m/min, 30m/min; operated in the hall, 30m/min、45m/min、60m/min、75m/min. The crane is equipped with the safe equipment, it has highly defendable characteristic.

1.2.4 电动葫芦

The motor-driven calabash

电动葫芦可起升重物，并沿主梁纵向移动，其结构特点详见有关电动葫芦说明书。The calabash may lift heavy things and move along the main beam; its structure and characteristic can be found in the introductions of the calabash.

1.2.5 产品型号注解

Notes to the types of the crane

a)、地面操纵、起重机 3t、跨度 10.5m、工作级别 A₅，表示方法方法为：

LDA3t-10.5m A₅D

The operation on the ground. Lifting 3t, span 10.5m. the degree of work A₅ showing method: LDA3t-10.5m A₅D

b)、操纵室操纵、起重机 5t、跨度 16.5m、工作级别 A₅，表示方法方法为：

LDA5t-16.5m A₅S

The operation in the operating room. Lifting 5t, span 16.5m. the degree of work A₅
showing method: LDA5t-16.5m A₅S

c)、起重机为 16t 时，是我厂设计开发的新产品，当其地面操纵跨度为 10.5m，工作级别为 A₅ 时，其表示方法为：

LD_{WH}16t-10.5m A₅D

When lifting 16t is our compay design open-up new product, the operation on the ground,span 10.5m, the degree of work A₅ showing method: LD_{WH}16t-10.5m A₅D

2、外形总图(图一)

Pirctrues of the outer shapes (Picture 1)

3、性能参数 (图二)

The function parameter (Picture 2)

4、安装

Installation

4.1 主横梁连接

Main beam connected

4.1.1 在现场将起重机运行机构的驱动装置安装在横梁上。

The driving-equipment of the travelling structure of the crane is installed on the crossbeam on the ground.

4.1.2 按图 2-1、2-2、2-3 所示，将主横梁用螺栓连接起来，此螺栓为精制螺栓，其性能可保证主、横梁连接可靠、紧固螺栓时上下、左右对称，依次紧固。为更安全允许用户按图 2 在 a、b、c 处稍加间断，施焊不宜焊得太满，以防变形。主、横梁组装后可按标准 JB/T1306-94 中有关要求进行检查。主、横梁组装连接面应清理干净。

According to picture 2-1,2-2,2-3 to connect the main beam using the bolts. These bolts are made with extra care. Their characteristic can ensure, the main beam and crossbeam connecting fixedly. To fasten the bolts one by one up and down, right and left. In order to be safer allow the users to weld a,b,c interupedly according to picture 2, no needing to welt them fully. To protect to the form changed. The main beam and crossbeam have been installed. Then to test it accordng to the standard JB/T1306-94. The main beam and the cross beam's installing surface should be clean.

4.1.3 将起重机的行程开关及开关箱等电器组装到横梁上，接通电器，调试两个运行电机，使其转向一致。

To travelling switch and switch case and electric equipment of the crane should be fixed on the crossbeam, then connect to the power source debugging the travelling motor to make it move in the same direction.

4.1.4 电动葫芦可预先装在主梁上，同起重机一起架高到轨道上，也可以分别安装。

The motor-driven calabash should be fixed on the main beam in advance then erected on the tracks with the crane together but fixed separately also.

4.1.5 操纵室操纵起重机。操纵室须在起重机架设到轨道之后，再组装到起重机上。

To operate the crane in the operating room, first the crane should be erected on the tracks then the operating room should be fixed on the crane.

4.1.6 参照图 3、图 4、图 5 架设电源滑触线装置。

Reference to picture 3 and picture 4 to erect the equipment of the slippery and touching electric source wire.

4.1.7 按电器图接通线路，并调试使起重机动作方向与操纵按钮规定的方向一致。

According to the electric route to connect with the power source and debug the moving direction of the crane and operate the direction of the button as the sauce of the crane.

4.1.8 阻进器和安全尺寸参照图 6 架设。

Reference to picture 5 to erect the safe ruler and the blocking advancing equipment.

4.1.9 操纵室安装见图 1 所示，将连接座 2 同横梁 1 用螺栓组装好，连接架 4 和操纵室 5 连成一体，最后同连接座 2 和 3 相连接。

Reference to picture 1, to fix the operating room. Connect seat 1 with the crossbeam 1 using the bolts, and form 4 with the operating room 5. Finally connect seat 2 with 3 phases.

4.1.10 轨道的选择参照图 7 和表 3, 车轮槽宽与轨道面应保证有一定的间隙 $\Delta=8\sim 12\text{mm}$ 。

The choice of the tracks refers to picture 6, and table 4 ensure to keep gap between wheel through and the surface of the tracks $\Delta=8\sim 12\text{mm}$.

a)、轨道跨度公差： $\pm 5\text{mm}$

Track span public errand: $\pm 5\text{mm}$

b)、轨道顶面标高差： $\leq S/1000\text{mm}$

The track top surface level height errand: $\leq S/1000\text{mm}$

c)、轨道接头公差： $2\sim 3\text{mm}$

The track joint public errand: $2\sim 3\text{mm}$

d)、轨道弯曲公差： $\pm 3\text{mm}$

The track winding public errand: $\pm 3\text{mm}$

e)、轨道倾斜度： $L/1000\sim L/2000\text{mm}$

The track gradient: $L/1000\sim L/2000\text{mm}$

上式：S—起重机跨度 L—轨道长度

Above the model S—the crane span L—the track length

5. 使用

Usage

5.1 试车在无载荷的情况下，接通电源、开动并检查各运转机构控制系统和安全装置，均应灵敏准确，安全可靠方可使用。

To test run without any load. Connect with the power. Operate and test every moving, controlling system safe equipment.

5.2 不准超过起重机额定载荷起重。

Don't allow the crane to lift overload.

5.3 不准斜吊物品。

Don't lift goods tiltedly.

5.4 物品重量不清不准起吊。

The weight of goods is not clear. Don't lift.

6. 维护

Safeguard

6.1 用户应做到经常检查起重机各部位是否有异常现象，尤其是主横梁连接处，若未加施焊，更要经常检查。

The user must usually inspect every part of the crane, whether there is any unusual phenomenon, especially the joint of the main beam and the crossbeam is not welded. To check it more usually.

6.2 润滑（如图 8 所示）

Lubrication (picture 8)

6.2.1 通过油塞 6 注入钙基润滑脂（GB491）润滑车轮轴承，润滑周期 3 个月，油量为 1/2~1/3 轴承容量。

To pour into calcium base lubricating grease (GB491) through the oil stopper. 6 to lubricate the bearing of wheel. The lubricating cycle is three months. Oil quantity is 1/2-1/3 content of the bearing.

6.2.2 取下油塞 8 注入粘度为 5.1M~5.89° E 50#机械油（GB443）。建议润滑周期为 6 个月。

Take off the oil stopper 8 pour into viscosity 5.1M~5.89° E 50# mechanical oil (GB443), suggesting the cycle of the lubricating should be six months.

6.3 随时检查车轮，不应有裂缝、压痕及过分的磨损，上述缺陷深度超过 3mm 时，应立即报废，更换新车轮，更换方法见图 7 即可，把车轮 3 取出更换、装配时按顺序进行。

Check the wheel usually it doesn't have any crevices, pressing marks and sign of user and tear much. The depth of the mark and sign of wear and tear is over 3mm it must be

reported as worthless at once, and changed a new one.

6.4 起重机制动器的调整如图 9，取下电动机风扇罩 7，松开螺钉 6，拧紧调整螺母 5，然后再将螺母 5 松一圈半，将调整螺母 5 固定好即为调整完毕。（但 10t 电动葫芦不是此法）

The brake for the crane is reuqlated according to Picture 8. take the cover of motor's fan 7. not hard up to the screw 6 ,fasten the regulating screw 5. then th make the nut 5 a circle and half ,to become less crowded fix the nut 5 on well that all.