



移绳定位锚绞车  
Position Mooring Winch



托管架绞车  
Singer Winch



拖缆绞车  
Towing Winch



系泊绞车  
Mooring Winch



拖电绞车  
Daggle Winch



起锚机  
Windlass



桩定位绞车  
Spud Winch



收梯绞车  
Winch for Ladder



绕缆器  
Wire Winder



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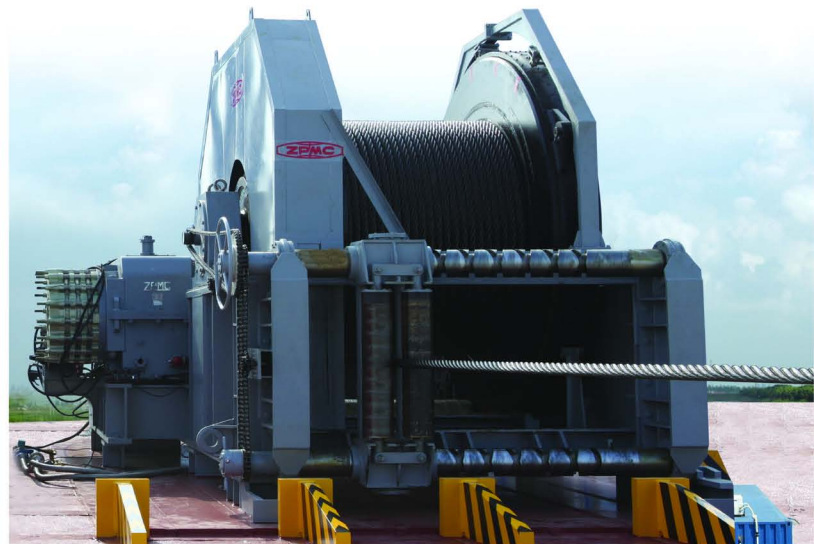
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拉动世界的力量

## 重型锚机 Heavy-Duty Winch



**上海振华重工(集团)股份有限公司**  
Shanghai Zhenhua Heavy Industries Co., Ltd.

**上海振华重工集团(南通)传动机械有限公司**  
Shanghai Zhenhua Heavy Industries (Nantong) Transmission Machinery Co., Ltd.

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■ 上海振华重工(集团)股份有限公司(ZPMC)是重型装备制造行业的知名企业,为国有控股A、B股上市公司,控股方为世界500强之一的中国交通建设股份有限公司。

公司总部设在上海,并在上海长兴及南通、江阴等地设有8个生产基地,占地总面积1万亩,总岸线10公里,特别是长江口的长兴基地有深水岸线5公里,承重码头3.7公里,是全国也是世界上最大的重型装备制造厂。公司拥有28艘6万吨~10万吨级整机运输船,可将大型产品跨海越洋运往全世界。

公司主要产品分为五类:(1)港口用大型集装箱机械和矿石煤炭等散货装卸机械。遍布全世界76个国家主要集装箱码头的岸桥、场桥,产量已占世界市场75%以上份额。散货装卸设备如装卸船机、斗轮堆取料机、环保型链斗卸船机等也居本行业前列。(2)海工产品。如巨型浮吊、铺管船和各种工程船、各种平台以及动力定位装置和平台抬升装置等。(3)大型钢结构桥梁。公司有年产各种钢构100万吨的能力,目前正在建造世界桥梁界视为高难度项目的美国旧金山新海湾大桥。(4)能源环保设备。包括海上风电、海水淡化和污水处理等设备。(5)工程(矿石)机械。

公司历年“自主创新”,曾获国家科技进步一等奖。建有国家级企业技术中心和博士后工作站。现有2400名从事机、电、液设计研发的工程技术人员,获得国家和市级科技成果奖50余项。

近年来,ZPMC向开采海上油气田的海上重型设备产品进军,重型锚绞车作为海上定位作业的关键设备成为了公司的研发重点之一。经过了数年的技术开发和人才储备,截至2015年底,ZPMC已经生产重型锚机680多台。上海振华重工集团(南通)传动机械有限公司也被振华集团列为锚机专业生产基地。

Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC) is a famous heavy-duty equipment manufacturer, and a state owned company listed on A and B shares on Shanghai Stock Exchange. The major shareholder is China Communication Construction Co., Ltd. (CCCC) which is one of the top 500 companies in the world.

ZPMC headquarter is located in Shanghai. ZPMC also has 8 producing bases located in Shanghai, Nantong and Jiangyin, with total area of 6,670,000 square meters and 10 kilometers coastline, especially the Changxing Base, which has a 5 kilometers deep water coastline, and includes a heavy-duty dock of 3.7 kilometers. ZPMC is the largest heavy-duty equipment manufacturer of the world and owns a fleet of 28 transportation ships from 60,000 DWT to 100,000 DWT which can deliver products all over the world.

There are five main types of products: Firstly, supply of large-scale port container machinery and bulk material handling machinery for ore and coal, such as quayside container cranes and rubber-tyred gantry cranes, which have entered into 76 countries and regions all over the world and occupied 75% world market shares. Bulk material handling machinery includes ship loaders, ship unloaders, bucket-wheel stacker-reclaimers and environment-friendly chain-bucket ship unloaders. Secondly, supply of offshore products, such as floating cranes, pipelaying vessels and other engineering vessels, all types of platforms, DP systems and jacking systems. Thirdly, supply of large-scale steel structures and steel bridges. The production capacity is 1,000,000 tons per year. Currently ZPMC is responsible for the construction of the USA's New Bay Bridge. Fourthly, energy environmental protection equipments, including offshore wind power, seawater desalination, sewage disposal equipments and etc. Fifthly, Engineering (Mining) machinery.

ZPMC insists on self-innovation and has been awarded a first award from National Science and Technology Progress. ZPMC has also established a national level enterprise technology center and post-doctoral workstation. At present, ZPMC has 2,400 R&D technical engineers in mechanical, electrical and hydraulic, and have been awarded more than 50 national and municipal technology awards.

In recent years, ZPMC has exploited the market for offshore oil and gas extraction heavy-duty equipment products. As the key equipment which are widely used in oceanengineering, ZPMC started to develop the heavy-duty winch and brought up its own technicians. By the end of 2015 ZPMC has manufactured over 680 sets of heavy-duty winches. Shanghai Zhenhua Heavy Industries (Nantong) Transmission Machinery Co., Ltd. became the special production base for winches.





五轴联动加工中心  
5-axis interconnected machine process



TK6926数控落地镗床  
CNC floor boring and milling machine



六米数控磨齿机  
6 meters CNC gear grinding machine Rapid 600A1



5米渗碳淬火生产线  
5 meters carburizing quenching  
furnace production line



3米克林贝尔齿轮测量仪  
Klingelnberg CNC gear measuring center P300



三坐标测量机  
CMM

## 生产基地介绍

### Introduction of Production Base

■ 上海振华重工集团（南通）传动机械有限公司（原名南通振华重型齿轮箱厂）是上海振华重工（集团）股份有限公司下属子公司，坐落于江苏省南通市经济技术开发区团结河东路1号，南面长江，西邻苏通大桥，与沿江、沿海高速公路相通，具有优越的地理位置和交通条件。厂区面积333500平方米，建筑面积179000平方米，制造能力雄厚。

上海振华重工集团（南通）传动机械有限公司产品系列主要有：大型硬齿面行星人字齿减速器、平行轴式减速器、大型立式行星减速箱、大型锚绞机双分流减速器、差动减速器、大型焊接式硬齿面齿轮、动力定位系统、海洋平台桩腿提升系统、驱动桥产品、重型锚绞系统、翻车机、大型高精度硬齿面螺旋伞齿轮、大型无退刀槽整体式人字齿轮等。

公司以精细化管理作为企业发展的目标。先后通过了ISO9001质量管理体系、OHSAS18001职业健康安全管理体系、ISO 14000环境管理体系等多项认证，并获得了ABS、GL、KR、BV等多家船级社的工厂认可和产品认可。

“世界知名、亚洲一流”是我们追求的目标，“大气、包容、协作、创新”是我们的企业文化，“品质第一、顾客至上”是我们的经营理念，顾客的需要永远是我们的第一要务，我们竭诚欢迎国内外各界新老客户与我们一起携手合作，共创美好的未来。

Shanghai Zhenhua Heavy Industries (Nantong) Transmission Machinery Co., Ltd. (the old name is Nantong Heavy Gear Reducer Branch) is a subsidiary of ZPMC. It locates at NO.1 East Tuanjie River Road, Nantong Economic and Technical Development Zone. This company has an excellent geographical and transportation advantage, for it lies south to the Yangtze River, west to the Sutong bridge, and connects with the Coastal highways. Our production base which covers 333500 square meters including 179000 square meters construction area is strong in manufacturing ability.

Our main products are large hardened gearbox with planetary and herringbone gear, parallel shaft series reducer, large vertical planetary reducer, large windlass double split flow reducer, differential reducer, large welding hardened gear, dynamic positioning system, ocean platform spud leg hoisting system, driving axle, heavy windlass system, tipping apparatus, large high precision hardened spiral bevel gear, large special herringbone gear without tool escape.

Our company regards Delicacy Management as the development goal. It has passed the ISO9001 quality management system, OHSAS 18001 occupational health and safety management system, ISO14000 environmental management system, etc. It also obtains lots of acceptance of the classification societies, such as ABS, GL, KR, BV, etc.

“World famous. Asian top—grade” is our goal. “Generosity, Friendship, Cooperation, Creativity” is our corporate culture. “Quality first supremacy of customers” is our management philosophy. The needs of customers are always our first priority. We sincerely welcome all the new and old customers to cooperate with us and create a better future together.



## 试验台简介

### Introduction of Test tower

ZPMC 高塔试验台配置有 690V, 440V, 380V 等供电系统以及 0-32MPa 液压站。可对各种型号和类型的电动或液压产品进行全方位的测试, 保证所有出厂产品安全可靠。试验台控制功能高度集成化, 具有安装简易, 通电即用的特点。多功能高塔试验台是 ZPMC 的又一大核心竞争力。

ZPMC test tower is equipped with 690V, 440V, 380V power supply system and 0-32MPa hydraulic power station, which can do all kinds of tests of different type of electric or hydraulic productions. The control system is highly integrated so that it can be installed simply and power-and-go. The Multi-functional test tower is another core competitiveness of ZPMC.

1. 额定单索吊重 500 吨 (最大 600 吨), 有效行程  $\geq 16\text{m}$ ;
2. 配置了超大功率的  $2 \times 1500\text{kW}$  的测试变频器和  $2 \times 600\text{kW}$  液压动力站;
3. 可测试各类型超大功率的锚机, 锚链机, 张紧器等;
4. 可测试实验内容包括: 各种拉力试验, 快速放绳试验, 排绳试验, 支持负载试验, 钢丝绳测试, 卷筒测试, 阻尼制动器测试, 水冷效果测试等等。
5. ZPMC 可提供锚绞车机、电、液成套系统, 并予工厂测试。

1. The biggest in land, single rope load can reach 500t (max:600t). Effective travel  $\geq 16\text{m}$
2. Perfect hardware device:  $2 \times 1500\text{kW}$  inverter for testing and  $2 \times 600\text{kW}$  hydraulic power station
3. The testing tower can test all kinds of winch, windlass, tensioner and etc.
4. Testing options: Heavy load test, high speed pulling test, wire rope spooling test, hold load test, wire rope test, drum test, damp brake test, water cooling system test etc.
5. ZPMC can supply heavy-duty winch, including mechanism frame, electric control system and hydraulic control system together, and proceed to shop test.

通过试验台测试的 ZPMC 重型锚机, 目前已获得 CCS, ABS, LR, KR 和 DNV 等船级社的认证证书。  
By the test tower ZPMC's heavy-duty winch has been certificated by CCS, ABS, LR, KR, DNV and etc.





## ■ 移船定位锚机 Position Mooring Winch

ZPMC 为 30000t 半潜驳船提供的移船定位锚机。

ZPMC supplied position mooring winch to 30000t Semi-submersible vessel.

功能性配置:

排绳器, 水阻尼制动器, 离合器, 棘轮, 绳槽等。

主要参数:

额定拉力: 80 吨 @15 米 / 分钟 (中间层)

容绳量:  $\phi 66$  毫米 / 1700 米

自由抛工况: 15 吨 @100 米 / 分钟

控制形式: 完整 PLC, 恒张力系统, 成组控制

驱动形式: 虚拟 24 脉冲, 交流变频

船级社: CCS 认证



Functional configuration:

spooling device, water-cooling brake, clutch, ratchet, groove and etc.

Main parameter:

Work load: 80ton@15m/min (@mid layer)

Capacity:  $\phi 66$ mm/1700m

Free pulling condition: 15ton@100m/min,

Control mode: Wholly PLC, constant tension system and group control

Drive mode: 24 impulse rectifying, AC inverter

Classification: CCS



## ■ 移船定位锚机 Position Mooring Winch

ZPMC 为 4500t 浮吊制造的移船定位锚机。

ZPMC built position-mooring winch for 4500t floating crane barge.

主要参数:

额定拉力: 110 吨 @15 米 / 分钟 (中间层)

自由抛工况: 20 吨 @120 米 / 分钟

容绳量:  $\phi 76$  毫米 / 2200 米

控制模式: 完整 PLC, 恒张力系统, 成组控制

驱动形式: 虚拟 24 脉冲, 交流变频

船级社: CCS 认证

Main parameter:

Work load: 110ton@15m/min (@mid layer)

Free pulling condition: 20ton@120m/min,

Capacity:  $\phi 76$ mm/2200m

Control mode: Wholly PLC, constant tension system and group control

Drive mode: 24 impulse rectifying, AC inverter

Classification: CCS



## ■ 移船定位锚机 Position Mooring Winch

ZPMC 为 4000t 浮吊配备了液压移船定位锚机。

ZPMC built hydraulic position-mooring winch for 4000t floating crane.

主要参数:

额定拉力: 50 吨 @15 米 / 分钟 (第 2 层)

容绳量:  $\phi 46$  毫米 / 500 米

控制形式: 恒张力系统, 成组控制

驱动形式: 液压驱动

船级社: CCS 认证

Main parameter:

Work load: 50ton@15m/min (@2nd layer)

Capacity:  $\phi 46$ mm/500m

Control mode: constant tension system and group control

Drive mode: hydraulic driving

Classification: CCS



## ■ 移船定位锚机 Position Mooring Winch

ZPMC 为铺管船制造了移船定位锚机。

ZPMC built position-mooring winch for pipe-laying crane barge.

主要参数:

额定拉力: 100 吨 @ 18 米 / 分钟 (中间层)

自由抛工况: 20 吨 @ 120 米 / 分钟

容绳量:  $\phi 68$  毫米 / 1700 米

控制模式: 完整 PLC, 恒张力系统, 成组控制

驱动形式: 虚拟 24 脉冲, 交流变频

船级社: CCS 认证

Main parameter:

Work load: 100ton@18m/min (@mid layer)

Free pulling condition: 20ton@120m/min

Capacity:  $\phi 68$ mm/1700m

Control mode: Wholly PLC, constant tension system and group

control

Drive mode: 24 impulse rectifying, AC inverter

Classification: CCS



## ■ 托管架绞车 Stinger Winch

ZPMC 为浅水铺管船制作的托管架绞车。

ZPMC built stinger winch for pipe-laying crane barge.

功能性配置:

排绳器, 棘轮, 绳槽等

主要参数:

额定拉力: 45 吨 @ 10 米 / 分钟 (最外层)

容绳量:  $\phi 44$  毫米 / 700 米

控制形式: 完整 PLC, 恒张力系统, 联动和独立

操作模式

驱动形式: 12 脉冲整流, 交流变频

Functional configuration:

spooling device, groove, ratchet and etc.

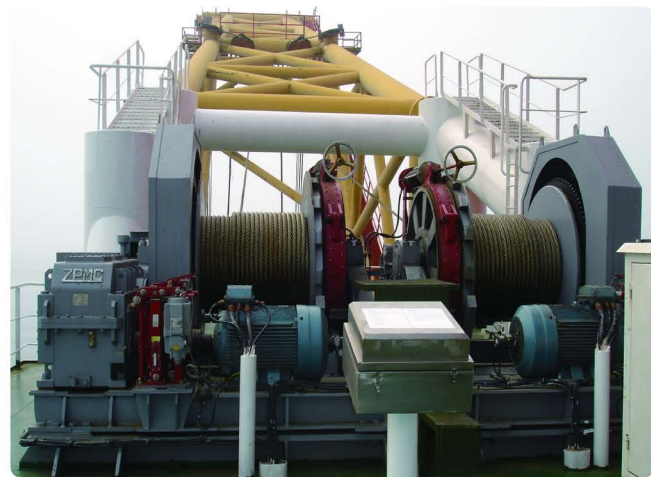
Main parameter:

Work load: 45ton @ 10m/min (@last layer),

Capacity:  $\phi 44$ mm/700m

Control mode: Wholly PLC, constant tension system, interlocked and independent control mode

Drive mode: 12 impulse rectifying, AC inverter



## ■ 电动拖缆绞车 Electric Towing Winch

ZPMC 为多功能工程船制作的拖缆绞车。

ZPMC supplied towing winch for multifunctional work ship.

功能性配置:

液压排绳器, 开式齿轮自润滑系统等。

主要参数:

额定拉力: 170 吨 @20 米 / 分钟 (第 1 层)

容绳量:  $\phi 76.2$  毫米 / 7000 米 钢丝绳

$\phi 203$  毫米 / 1800 米 尼龙绳

船级社: LR 认证

Functional configuration:

hydraulic spooling device, automatic  
lubricating system for open gear and etc.

Main parameter:

Work load: 170ton @ 20m/min (@ 1st  
layer)

Capacity:  $\phi 76.2$ mm/7000m

$\phi 203$ mm/1800m

Classification: LR



## ■ 电动系泊绞车 Electric Mooring Winch

ZPMC 为宁波港鼠浪湖码头制作的系泊绞车。

ZPMC supplied mooring winch for Ningbo port.

功能性配置:

档位选择, 恒张力系统, 远程监控台, 以太网与光纤通讯

主要参数:

额定拉力: 32 吨 @8 米 / 分钟 (第一层)

容绳量:  $\phi 88$  毫米 / 220 米

自由拖工况: 15 米 / 分钟

控制形式: PLC 程序控制

驱动形式: 变频驱动

Functional configuration:

gear selection, constant tension system, remote monitoring  
station, ethernet and optical fiber communication

Main parameter:

Work load: 32ton @ 8m/min (@ 1st layer)

Capacity:  $\phi 88$ mm/220m

Free pulling condition: 15m/min

Control mode: PLC control

Drive mode: Variable frequency drive





## ■ 液压拖缆绞车 Hydraulic Towing Winch

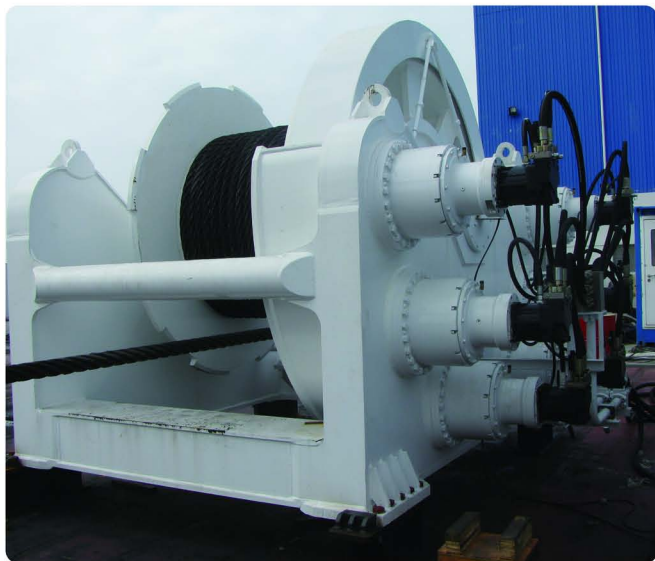
ZPMC 制作的 200 吨液压拖缆绞车。  
ZPMC built 200t hydraulic towing winch.

主要参数:

额定拉力: 200 吨 @5 米 / 分钟  
容绳量:  $\phi 76$  毫米 / 500 米  
船级社: CCS 认证

Main parameter:

Work load: 200ton @5m/min  
Capacity:  $\phi 76\text{mm}/500\text{m}$   
Classification: CCS



## ■ 液压线性绞车 Hydraulic linear winch

ZPMC 为广州打捞局制作的 450 吨液压线性绞车。  
ZPMC supplied 450t Hydraulic linear winch for Guangzhou salvage bureau.

功能性配置:

夹具, 主推油缸, 夹具油缸

主要参数:

额定拉力: 450 吨  
驱动形式: 液压驱动

Functional configuration:

workholder, main push cylinder, clamp cylinder

Main parameter:

Work load: 450ton  
Drive mode: hydraulic driving





## A 字架绞车 A Shape Winch

### 主要参数

额定拉力 40吨@20m/min (第七层)

容绳量  $\phi 44$ 毫米/550米

### Main parameter:

Work load: 40ton@20m/min(7th layer)

Capacity:  $\phi 44$ mm/220m



## 深海定位绞车 Deep-water Position Mooring Winch

### 应用领域:

半潜平台或钻井船。

### 主要参数:

容绳量:  $2 \times 90$  毫米/3000 米

额定拉力: 180 吨 @15 米 / 分钟 (中间层)

轻载工况: 90 吨 @30 米 / 分钟 (中间层)

90 吨 @15 米 / 分钟 (双筒同时作业)

最大拉力: 270 吨 (中间层)

动态制动能力: 80 吨 @100 米 / 分钟

支持负载: 660 吨 (第 1 层)

### Application:

The winch system will be used in Mobile Offshore Drilling Units to position.

### Main parameter:

Capacity:  $2 \times 90$ mm/3000m

Rated pull: 180T@15m/min (mid-layer)

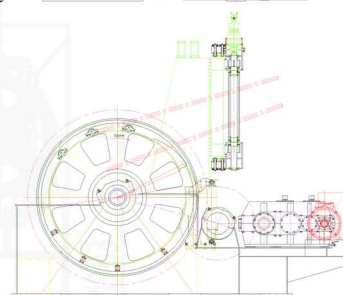
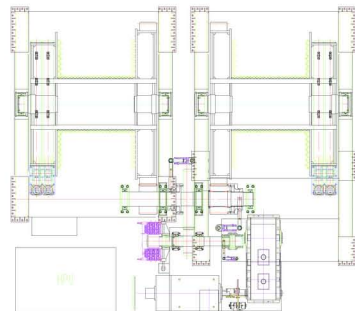
Light pull: 90T@30m/min (mid-layer)

90T @15m/min (for two drums)

Stall pull: 270T (mid-layer)

Dynamic capacity: 80T@100m/min

Braking load: 660T (1st layer)



### ■ 重型锚绞机主要业绩

List of Heavy-duty Winches Manufactured by ZPMC

序号 No.	项目名称 Project Name	用户 End User	拉力 Load	容量 Capacity	驱动形式 Drive mode	数量 Q'ty
1	4000T浮吊“华天龙”号 "Hua Tianlong" 4000t revolving floating crane barge	广州打捞局 Guangzhou Salvage Bureau, China	110T	2200m/76mm	电动 AC inverter	8
2	7500T浮吊“蓝鲸”号 "Lan Jing" 7500t revolving floating crane barge	中海油 COOEC, China	110T	2500m/76mm	电动 AC inverter	10
3	ABF 1700T浮吊 ABF 1700T Shear-leg floating crane	AB/FLUOR, USA	60T	600m/46mm	电动 AC inverter	12
4	“海油202”1200T浅水铺管船 "HYSY 202" 1200T Pipe-laying crane barge	中海油 COOEC, China	110T	2500m/76mm	电动 AC inverter	12
5	3000T全回转浮吊 3000t revolving floating crane barge	上海打捞局 Shanghai Salvage Bureau, China	80T	2000m/66mm	电动 AC inverter	8
6	三星8000T浮吊 Samsung 8000t shear-leg floating crane barge	韩国三星 SAMSUNG, Korea	60T	600m/60mm	电动 AC inverter	10
7	3000T浅水铺管船 3000t pipe-laying crane barge	卢森堡 Russia	110T	2500m/76mm	电动 AC inverter	12
8	30000T半潜船 30000T Semi-submersible vessel	广州打捞局 Guangzhou Salvage Bureau, China	80T	1700m/64mm	电动 AC inverter	4
9	Gargat铺管船 Pipe-laying crane barge	OIS, 英国 OIS, Britain	90T	1500m/60mm	电动 AC inverter	8
10	胜利902浅水铺管船 "Shengli 902" pipe-laying crane barge	胜利油田 Shengli Oilfield, China	100T	1800m/68mm	电动 AC inverter	10
11	华西海工4500T浮吊 4500t revolving floating crane barge	华西村 Jiangyin Hua xi, China	110T	2500m/76mm	电动 AC inverter	8
12	3000T浅水铺管船 3000t pipe-laying crane barge	新加坡Swiber Swiber, Singapore	110T	2500m/76mm	电动 AC inverter	12
13	丹麦170T绞车 Maersk 170t winch	丹麦马士基 Maersk, Denmark	170T	7000m/76mm	电动 AC inverter	9
14	ZPMC 12000T浮吊 ZPMC 1200t floating crane barge	振华重工 ZPMC, China	140T	3000m/83mm	电动 AC inverter	12
15	俄罗斯托管架绞车 MRTS stinger winch	俄罗斯MRTS公司 MRTS, Russia	75T	1500m/64mm	电动 AC inverter	2
16	三星8000T浮吊航行锚机 8000t floating crane barge	韩国三星 SAMSUNG, Korea	80T	φ 97	电动 AC inverter	2

### ■ 重型锚绞机主要业绩

List of Heavy-duty Winches Manufactured by ZPMC

序号 No.	项目名称 Project Name	用户 End User	拉力 Load	容量 Capacity	驱动形式 Drive mode	数量 Q'ty
17	上海外高桥船厂锚机 SWS winch	外高桥造船 SWS, China	40T	914m/52mm	电动 AC inverter	8
18	4500T浮吊 4500t floating crane barge	华西村 Jiangyin Hua xi, China	32T	21800m/48mm	电动 AC inverter	1
19	烟台打捞局5000T浮吊绞车 5000T floating crane barge	烟台打捞局 Yantai Salvage Bureau, China	30T	200m	电动 AC inverter	12
20	301铺管船110T定位锚绞车 301 pipe-laying crane barge	卓星（天津） Zhuosheng (Tianjin), China	110T	2500m/76mm	电动 AC inverter	12
21	天航局“天杉”号三缆定位绞车 "Tianshan" suction dredger	中交天航滨海环保设航 Tianjin dredging, China	60T	600m	电动 AC inverter	3
22	启东海洋工程锚机 Offshore Wind-farm installation platform	振华重工启东海洋 ZPMC Qidong, China	60T	1000m/60mm	电动 AC inverter	6
23	宁波港鼠浪湖一期系泊绞车 Ningbo port mooring winch	宁波港进出口公司 Ningbo Port, China	32T	220m/88mm	电动 AC inverter	10
24	4000T浮吊 4000t floating crane barge	中交一航局 CCCC, China	50T	1000m/56mm	液压 Hydraulic	9
25	210米半潜浮船坞 210m Semi-submersible vessel	振华重工 ZPMC, China	40T	500m/56mm	液压 Hydraulic	4
26	1600T浮吊 1600t floating crane barge	中交一航局 CCCC, China	80T	1500m/68mm	液压 Hydraulic	8
27	挪威钢桥绞车 Transportation barge	挪威 Norway	100T	1000m/60mm	液压 Hydraulic	8
28	天津管道局拖缆机 Hydraulic towing winch	天津大港油田 Tianjin, China	200T	500m/76mm	液压 Hydraulic	1
29	中船黄埔文冲托管架绞车 CSSC Huangpu Wenchong stinger winch	中船黄埔文冲 CSSC Huangpu Wenchong, China	60T	700m/56mm	液压 Hydraulic	2
30	广州打捞局450T线性绞车 450T linear winch	广州打捞局 Guangzhou Salvage Bureau, China	450T	/	液压 Hydraulic	56
31	新加坡Zeus Marine托管架绞车 Zeus Marine stinger winch	Zeus Marine, Singapore	100T	500m/58mm	液压 Hydraulic	2
32	海新5200kW绞刀绞吸船绞车 5200kW cutter suction dredger	海新船务重工 HX, China	20T	100m/36mm	液压 Hydraulic	8