

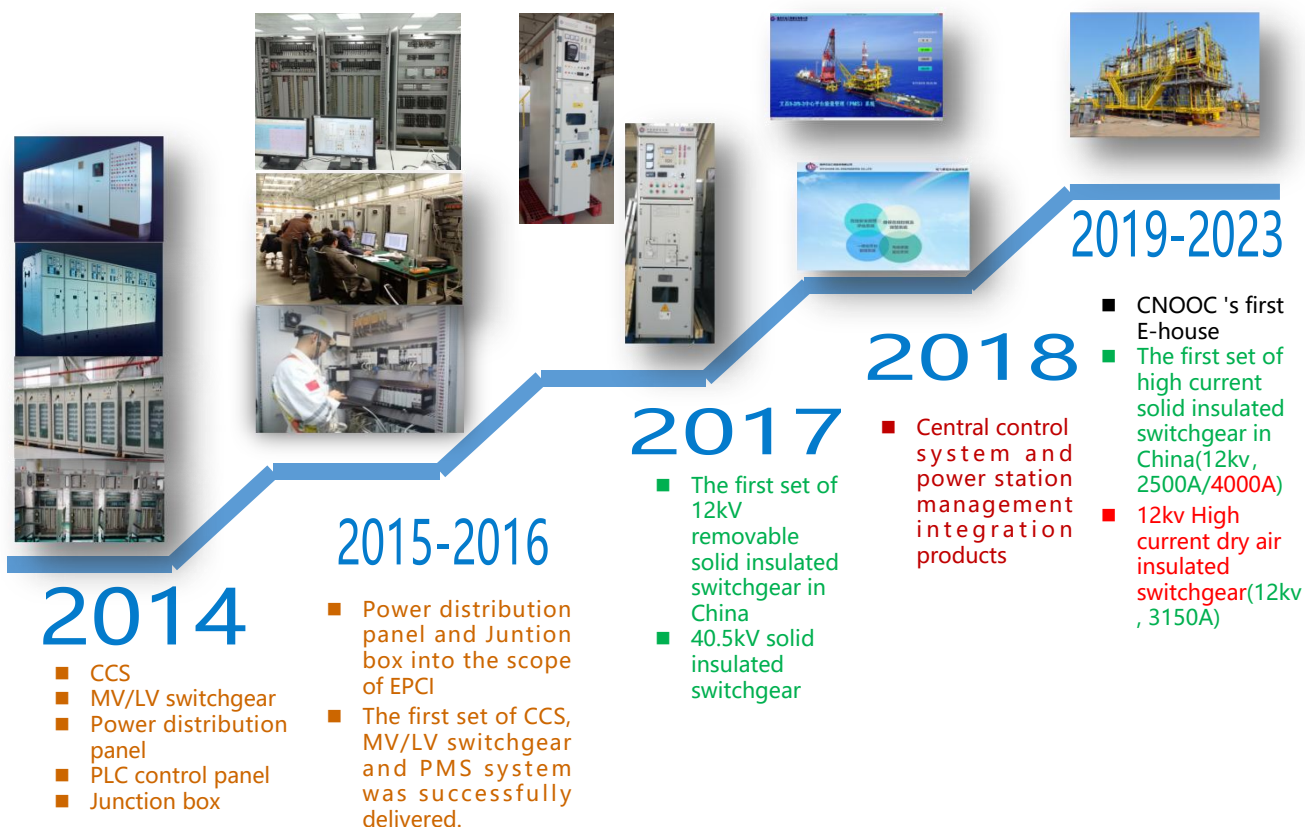
电仪产品解决方案 Electrical Switchgear and Control System Products



CORE TECHNOLOGICAL CAPACITY

经过多年发展, 已具备海上油气田中控系统、EMS系统、大型撬装设备控制系统、配电盘柜 (35KV及以下) 等产品设计、集成、测试及售后服务能力。截至目前, 已为公司几十个项目累计提供5,000余套合格电控产品。

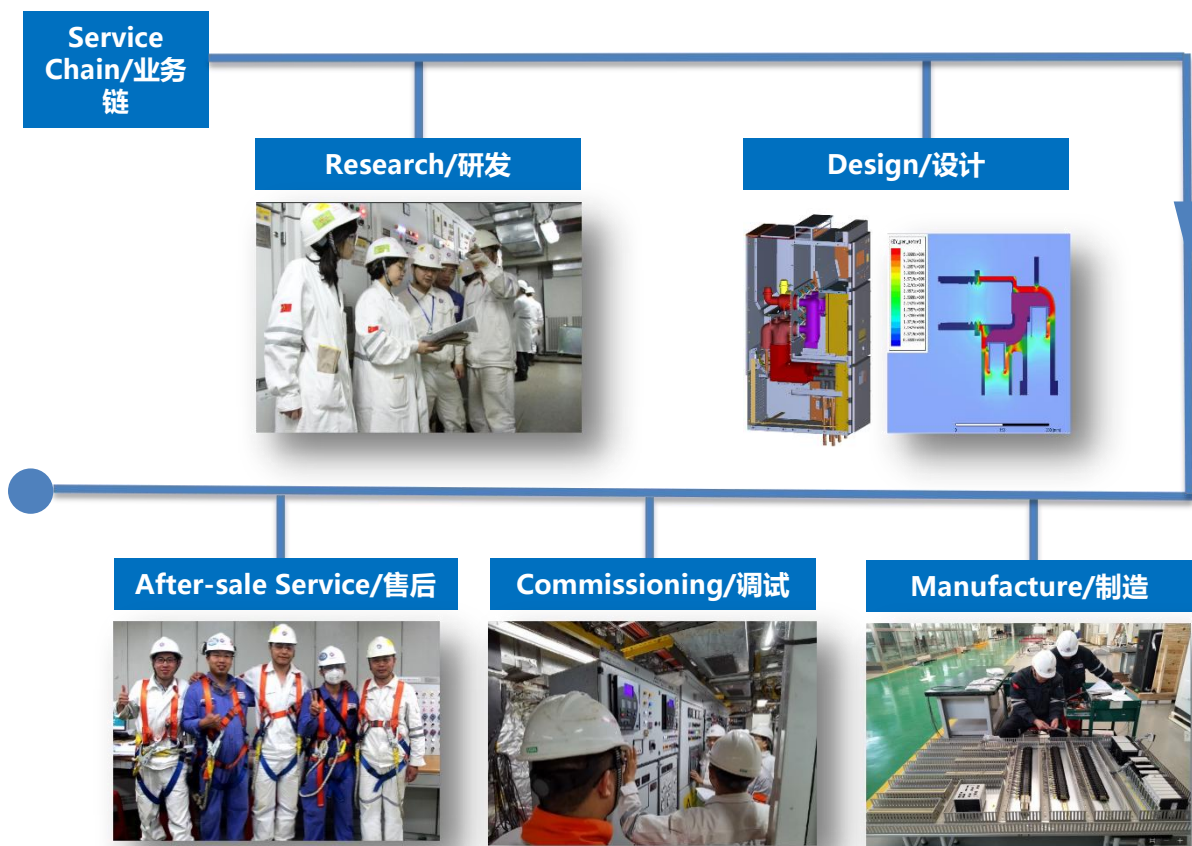
After several years of development, we have fully possessed the product design, integration, testing and after-sales service capabilities of Central Control System, Power Management System(EMS), Compressor Control System, High and Medium Voltage Switchgear(HVS/MVS), Low Voltage and Small Power Distribution Board, and so on. Up to now, more than 5,000 sets of electric instrument products have been provided for several offshore oil and gas field projects.



CORE TECHNOLOGICAL CAPACITY

擎海智控系列主要针对电仪产品，包含中高压配电产品、低压配电产品、控制系统产品、智能化系统产品四大类，通过多年的积累，电气产品参数实现海油项目100%覆盖，具有一支技术过硬的团队，可根据客户需求进行研发、定制，最大程度缩短工期，满足项目需求。同时售后团队及时跟踪产品运行情况，及时解决现场问题，形成产品闭环管理。

The Qinghai series including medium and high voltage power distribution products, low voltage power distribution products, control system products, and intelligent system products. Through years of accumulation, the electrical product parameters have achieved 100% coverage of the CNOOC project. A team with excellent technology can develop and customize according to customer needs, shorten the construction period to the greatest extent, and meet the project requirements. At the same time, the after-sales team tracks the operation of the product in time, solves the on-site problems in time, and forms a closed-loop management of the product.



中高压配电设备 HV/MV switchgear



概述 Overview

中高压盘是海洋油气平台关键的配电设施，用于海上油气平台6.3kV~35kV中高压配电。目前，公司已具备中高压开关柜设计、制造、测试、调试及售后服务能力，突破了空气大电流固体绝缘开关柜及环保气体绝缘开关柜技术，实现了参数全覆盖，可广泛用于海洋油气田、陆地终端、FPSO上部模块、国家电网、工厂配电、高压输电、铁路系统、城市配电、风力发电等各种场合，相关产品已在文昌9-2/9-3/10-3、南堡35-2、宁波19-6、乌石17-2/23-5、惠州26-6等项目中得到成功应用。

HV/MV switchgear is the key power distribution facility for offshore oil and gas platforms, which is used for 6.3kV ~ 35kV medium and high voltage power distribution. At present, we has the capability of designing, manufacturing, testing, commissioning and after-sales service of medium and high voltage switchgear, breaking through the technology of air high current solid insulated switchgear and environmentally friendly gas insulated switchgear, realizing the full coverage of parameters. It can be widely used in offshore oil and gas fields, land terminals, FPSO upper modules, national power grids, factory power distribution, high voltage transmission, railway systems, urban power distribution, wind power generation and so on. Relevant products have been successfully applied in WC9-2/9-3/10-3, NB35-2, NB19-6, WS 17-2/23-5, HZ 26-6 and other projects.



基本参数 Basic Parameter	环保气体绝缘开关柜 Dry air-filled insulated	固体绝缘开关柜 Solid-insulated	空气绝缘开关柜 Air-insulated
额定电压/Rated Voltage	40.5	12~40.5	12
额定电流/Rated Current	630~1250A	630~4000A	630~4000A
额定短路开断电流/ Short-circuit breaking current	25/31.5	25/31.5/40/50	25/31.5/40/50
一次防护等级/ Sealed electrified body	IP67	IP67	IP20
柜体防护等级/Enclosure	IP42	IP42	IP32
典型尺寸/Size (1250A, W*D*H,mm)	40.5kV:760*1400*2300	12kV:480*1200*2250; 40.5kV:600*1300*2300	800*1500*2350
重量/Weight (kg)	40.5kV:1200	12kV:680 40.5kV:780	800

时间/YEAR	项目名称/NAME	产品类型	数量/SET
2017年	文昌项目/Wenchang	Solid-insulated	2
2017年	文昌项目/Wenchang	Air-insulated	21
2021年	南堡项目/Nanbao	Solid-insulated	2
2022年	宁波项目/Ningbo	Solid-insulated	1
2022年	宁波项目/Ningbo	Dry air-filled insulated	1
2023年	惠州项目/Huizhou	Air-insulated	20
2023年	乌石项目/Wushi	Solid-insulated	8
2023年	乌干达项目/Uganda	Air-insulated	82



中高压配电设备 HV/MV switchgear

环保型气体绝缘中高压开关柜 (35kV) Dry air-filled insulated switchgear (35kV)



概述 Overview

与海上平台常用六氟化硫充气柜相比，该设备采用低压干燥空气/氮气作为绝缘介质，单台可减少碳排放100吨左右，尺寸与六氟化硫充气柜相差不多，可有效替代现有开关柜。

It has the functions of control, protection and detection. Compared with the commonly used SF₆-filled insulation switchgear on offshore platforms, the equipment uses low-pressure dry air / N₂ as the insulation medium, and 1 SET can reduce carbon emissions by about 100 tons. The size is not much different from the SF₆-filled insulation, which can effectively replace the existing HV switchgear.



基本参数 Basic Parameter

基本参数 Basic Parameter	EVI-40.5/T1250
额定电压/Rated Voltage	40.5
额定电流/Rated Current	630~1250A
额定短时耐受电流/Rated short-time withstand current (4s)	25/31.5
额定短路开断电流/Short-circuit breaking current	25/31.5
额定短路关合电流/Rated short-time making current	63/80
额定峰值耐受电流/Rated peak withstand current	63/80
额定短时工频耐受电压/1min power frequency withstand voltage	相间/Phase to phase: 95kV 相对地/Phase to earth: 95kV 断口/Across contacts: 118kV
额定雷电冲击耐受电压Lightning impulse withstand voltage	相间/Phase to phase: 118kV 相对地/Phase to earth: 118kV 断口/Across contacts: 185kV
充气压力/Rated pressure(20°C gauge)	0.03Mpa
防护等级/Degree of Protection	一次/Sealed electrified body: IP67 柜体/Enclosure: IP42
机械寿命/Mechanical endurance	断路器/VCB: 10000次 隔离开关/Disconnectors: 3000次
尺寸/Size(W*D*H,mm)	760*1400*2300
重量/Weight (kg)	1200

BUSINESS PARAMETERS

商务参数

供货周期	Supply Cycle	6~8 months
产品服务类型	Product Type	EPCI&After Sales Service

中高压配电设备 HV/MV switchgear

固体绝缘中高压开关柜 (12~35KV) Solid-insulated switchgear (12~35kV)



概述 Overview



该设备将高压带电体固封并采取局部屏蔽技术，具有体积小、重量轻、绝缘、安全及防护等级高等优点，相比传统空气绝缘开关柜，占地面积最大可缩小70%以上，重量可减轻80%，可广泛用于海洋油气田、陆地终端、FPSO上部模块、国家电网、工厂配电、高压输电、铁路系统、城市配电、风力发电等各种场合，可有效替代现有中高压开关柜。

The equipment solid seals the high-voltage charged body and adopts local shielding technology. It has the advantages of small size, light weight, insulation, safety and high protection level. Compared with the traditional switchgear, the area can be reduced by more than 70% and the weight can be reduced by 80%. It can be widely used in offshore oil and gas fields, land terminals, FPSO upper modules, national power grids, factory power distribution, high voltage transmission, railway systems, urban power distribution, wind power generation and other occasions and can effectively replace the existing switchgear.

基本参数 Basic Parameter

基本参数 Basic Parameter	SVIN-40.5/T1250	SVP - 12 / T
额定电压/Rated Voltage	40.5kV	12kV
额定电流/Rated Current	630~1250A	630~4000A
额定短时耐受电流/Rated short-time withstand current (4s)	25/31.5kA	25/31.5/40/50
额定短路开断电流/Short-circuit breaking current	25/31.5kA	25/31.5/40/50
额定短路关合电流/Rated short-time making current	63/80	63/80/100/125
额定峰值耐受电流/Rated peak withstand current	63/80	63/80/100/125
额定短时工频耐受电压/1min power frequency withstand voltage	相间/Phase to phase: 95kV 相对地/Phase to earth: 95kV 断口/Across contacts: 118kV	相间/Phase to phase: 42kV 相对地/Phase to earth: 42kV 断口/Across contacts: 48kV
额定雷电冲击耐受电压/Lightning impulse withstand voltage	相间/Phase to phase: 118kV 相对地/Phase to earth: 118kV 断口/Across contacts: 185kV	相间/Phase to phase: 75kV 相对地/Phase to earth: 75kV 断口/Across contacts: 85kV
防护等级/Degree of Protection	一次/Sealed electrified body: IP67 柜体/Enclosure: IP42	一次/Sealed electrified body: IP67 柜体/Enclosure: IP42
机械寿命/Mechanical endurance	断路器/VCB: 10000次 隔离开关/Disconnecter: 3000次	断路器/VCB: 20000次 隔离开关/Disconnecter: 3000次
尺寸/Size(W*D*H,mm)	600*1300*2300	1250A: 480*1200*2250 1600~2500A: 750*1260*2250 3150A~4000A: 900*1320*2250
重量/Weight (kg)	780	680~1000

BUSINESS PARAMETERS

商务参数

供货周期	Supply Cycle	4~6 months
产品服务类型	Product Type	EPCI&After Sales Service

中高压配电设备 HV/MV switchgear

空气绝缘中压开关柜 (12KV) Air-insulated switchgear (12kV)



概述 Overview

KYN28A/COOEC产品 用于3.6~12kV三相交流50Hz电力系统，可配微机综合保护及智能化监测装置，实现遥测、遥控、遥信和无人值守，可广泛用于海洋油气田、陆地终端、FPSO上部模块、国家电网、工厂配电、高压输电、铁路系统、城市配电、风力发电等各种场合。

KYN28A/COOEC is used in 3.6~12 kV three-phase AC 50 Hz power system. It can be equipped with microcomputer comprehensive protection and intelligent monitoring device to realize telemetry, remote control, remote communication and unattended operation. It can be widely used in offshore oil and gas fields, land terminals, FPSO upper modules, national power grids, factory power distribution, high voltage transmission, railway systems, urban power distribution, wind power generation and other occasions and can effectively replace the existing switchgear.

基本参数 Basic Parameter

产品型号/Model	KYN28A/COOEC - 12 / T
额定电压/Rated Voltage	12kA
额定电流/Rated Current	630~4000A
额定短时耐受电流/Rated short-time withstand current (4s)	25/31.5/40/50
额定短路开断电流/Short-circuit breaking current	25/31.5/40/50
额定短路关合电流/Rated short-time making current	63/80/100/125
额定峰值耐受电流/Rated peak withstand current	63/80/100/125
额定短时工频耐受电压/1min power frequency withstand voltage	相间/Phase to phase: 42kV 相对地/Phase to earth: 42kV 断口/Across contacts: 48kV
额定雷电冲击耐受电压Lightning impulse withstand voltage	相间/Phase to phase: 75kV 相对地/Phase to earth: 75kV 断口/Across contacts: 85kV
防护等级/Degree of Protection	一次/Sealed electrified body: IP20 柜体/Enclosure: IP32
机械寿命/Mechanical endurance	断路器/VCB: 20000次
尺寸/Size(W*D*H,mm)	1250A: 800*1500*2350 1600~4000A: 1000*1500*2350 VCS: 650*1500*2350
重量/Weight (kg)	750~1200

BUSINESS PARAMETERS

商务参数

供货周期	Supply Cycle	4~6 months
产品服务类型	Product Type	EPCI&After Sales Service

低压配电设备 Low voltage distribution equipment

低压开关柜 (400V) LV switchgear (400V)

COOEC-MNS (400V, 6300A,100KA)

概述 Overview

低压开关柜包括组块正常/应急低压开关柜和生活楼正常/应急低压开关柜。组块低压开关柜一般为柜后维护，主要采用PLC逻辑控制满足低压配电的三选二、黑启动和并车等不同工况需求。生活楼低压开关柜一般为靠墙安装柜前维护，为厨房、洗衣房等生活设施提供电能来源。

Low-voltage switchgear includes platform normal/emergency low-voltage switchgear and living quarters normal/emergency low-voltage switchgear. Platform low-voltage switchgear is generally maintained at the back of the cabinet and mainly uses PLC logic control to meet the needs of different working conditions such as two-out-of-three selection, black start, and parallel connection in low-voltage power distribution. The low-voltage switchgear in living quarters is generally installed against the wall and maintained at the front of the cabinet, providing a source of electrical energy for living facilities such as kitchens and laundry rooms..



基本参数 *Basic Parameter*

产品型号/Model	基本参数 Basic Parameter
COOEC-MNS	400V,400-4000A, 80KA, IP43
	400V,4000-6300A, 100KA, IP43

低压配电设备 Low voltage distribution equipment

低压开关柜 (400V) LV switchgear (400V)

技术规格 *Specification*

额定工作电压	Rated working voltage	400V
额定绝缘电压	Rated insulation voltage	690V
额定最大电流	Rated maximum current	6300A
额定短时耐受电流 (Icw/1s)	Rated short-term withstand current (Icw/1s)	100kA
设计寿命	Design Life	>25 years

商务参数 *Application Scope*

供货周期	Supply Cycle	4~6 months
产品服务类型	Product Type	EPCI&After Sales Service
核心元气品牌	Component Brands	ABB or Schneider

工程业绩 *Project performance*

时间/YEAR	项目名称/NAME	数量/SET
2020年	临港项目/Lingang	50
2021年	流花项目/liuhua	91
2023年	陵水项目/Lingshui	40
2023年	恩平项目/Enping	228
2023年	乌石项目/Wushi	85
2023年	陆丰项目/Lufeng	68
2023年	埕北项目/Chengbei	14
2023年	惠州项目/Huizhou	68

低压配电设备 Low voltage distribution equipment

小功率配电盘 (230V) Small power distribution panel (230V)



概述 Overview

小功率配电盘包括照明小功率配电盘和电伴热小功率配电盘。照明小功率配电盘为照明灯提供电能来源。在管线和容器的表面配有电伴热带用于各种管线、阀门和容器的防冻和保温，以及维持仪表管线的工艺温度，数以百计的电伴热回路的配电盘称为电伴热小功率配电盘。

Small power distribution panels include lighting small power distribution panels and electric heating small power distribution panels. The low power distribution panel for lighting provides a source of electrical energy for the lighting fixtures. Electric heat tracing strips are installed on the surface of pipelines and containers to prevent freezing and insulation of various pipelines, valves, and containers, as well as to maintain the process temperature of instrument pipelines. Hundreds of electric heat tracing circuit distribution boards are called electric heat tracing low-power distribution boards.

基本参数 Basic Parameter

基本参数 Basic Parameter	照明小功率盘 Small power distribution panel	电伴热小功率盘 HEAT TRACING PANEL	小功率分电箱 Small power distribution box
类型 Type	PZ2.0-I	PZ2.0-I	PDBC-I
IP等级 IP level	最高 IP33	最高 IP33	最高 IP54
尺寸 (mm) Size	H:2200 W:600/800/1000/1200/1600 D:600/800/1000/1200	H:2200 W:600/800/1000/1200/1600 D:600/800/1000/1200	H: 800/1200 W: 400/600/800 D: 260mm/300
设计寿命 Design Life	> 25 years	> 25 years	> 25 years
证书 certificate	230V, 100-1600A, 25KA	230V, 100-1600A, 25KA	230V, 250-32A, 25KA 400V, 250-63A, 30KA

低压配电设备 Low voltage distribution equipment

小功率配电箱 (230V) Small power distribution panel (230V)

技术规格 *Specification*

额定工作电压	Rated working voltage	230V
额定绝缘电压	Rated insulation voltage	440V
辅助电流绝缘电压	Auxiliary current insulation voltage	500V
额定冲击耐受电压	Rated impulse withstand voltage	8000V
额定最大电流	Rated maximum current	1600A
额定短时耐受电流 (Icw/1s)	Rated short-term withstand current (Icw/1s)	30kA
额定峰值耐受电流 (Ipk)	Rated peak withstand current (Ipk)	63kA
设计寿命	Design Life	>25 years

商务参数 *Application Scope*

供货周期	Supply Cycle	3~6 months
产品服务类型	Product Type	EPCI&After Sales Service

工程业绩 *Project performance*

时间/YEAR	项目名称/NAME	数量/SET
2022年	蓬莱项目/Penglai	42
2022年	绥中项目/Suizhong	88
2023年	恩平项目/Enping	20
2023年	渤中项目/Bozhong	55
2023年	乌石项目/Wushi	47
2023年	陆丰项目/Lufeng	20
2023年	惠州项目/huizhou	19
2024年	锦州项目/Jinzhou	56



概述 Overview

中控系统是海上油气田开发设施的大脑，由工艺控制系统（PCS）、紧急关断系统（ESD）和火气探测及消防系统（F&G）组成，可连续检测和控制海上油气田各种生产、公用设备的正常运行，同时对各种意外事故进行实时监控和处理。本产品适用于各类海上固定平台及FPSO，具有标准化操作界面及功能块，支持一键启动、台风模式等定制化功能开发，在文昌9-2/9-3CEP平台及唐山LNG接收站等多个项目中成功应用。

The central control system is the brain of offshore oil and gas field development facilities, consisting of process control system (PCS), emergency shutdown system (ESD), and fire and gas detection and fire protection system (F&G). It can continuously detect and control the normal operation of various production and public equipment in offshore oil and gas fields, and monitor and handle various accidents in real-time. This product is suitable for various types of fixed offshore platforms and FPSOs, with standardized HMI and function blocks. It supports customized function development such as one click start and typhoon mode. It has been successfully applied in multiple projects such as the WC 9-2/9-3 CEP platform and Tangshan LNG receiving station.

基本参数 Basic Parameter

	PCS系统	ESD系统	FGS系统
盘柜尺寸 Dimension	800mm x 800mmX2000mm	800mm x 800mmX2000mm	800mm x 800mmX2000mm
响应时间 Response Time	<500ms	<300ms	<300ms
冗余性 Redundancy	Controller, power, network, data bus	Controller, power, network, data bus I/O	Controller, power, network, data bus I/O
安全完整性 Security integrity level		SIL3	SIL3
通信速度 Leg Number	>= 100Mbps	>= 100Mbps	>= 100Mbps
系统类型 System Type	DCS	SIS	SIS

技术规格 *Specification*

系统负载率	System load rate	<50%
备用I/O比例	Spare I/O ratio	>=30%
安全完整性等级	Safety Integrity Level	SIL3 (SIS)
平均无故障时间	MTBF	>100万小时
SOE记录间隔	SOE Record Interval	5ms

商务参数 *Application Scope*

产品服务类型	Product Type	EPCI
供货周期	Supply Cycle	24~36 months

增值服务 *Value-added Services*

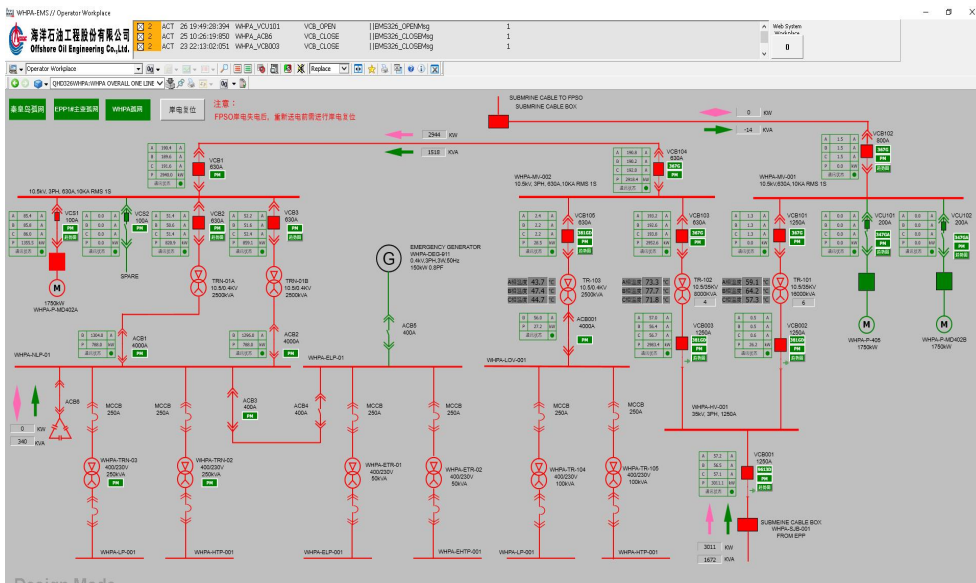
定制化功能	Customized Features
健康管理功能	Health Management Functions
维保服务	Maintenance
改造	Transform

工程业绩 *Project performance*

时间/YEAR	项目名称/NAME	数量/SET
2017年	文昌项目/Wenchang	4
2021年	秦皇岛项目/Qinhuangdao	10
2022年	陆丰项目/Lufeng	1
2022年	渤中项目/Bozhong	1
2022年	唐山项目/Tangshan	4
2023年	锦州项目/Jinzhou	4
2024年	崖城项目/Yacheng	1
2024年	文昌项目/Wenchang	1
2024年	涠洲项目/Weizhou	1

控制系统产品 Control system products

电能管理系统/EMS



概述 Overview

电能管理系统 (EMS) 是一个面向发、输、变、配、用电各个环节的综合自动化控制系统。其功能包括发电机组管控、电网有功无功潮流及电压控制、关键设备的监视和远程操控、电网在线安稳控制、电网运行热备用余量管理及关键负载的综合管控等功能。目前, 公司具备对孤岛电站平台以及多平台电力组网后的安稳策略制定能力, 掌握负荷管理、电力调度、大负载抑制、低压设备管理、故障脱扣管理等关键技术。产品可面向井口平台、动力平台、中心平台以及陆地处理终端等多种领域。目前该产品系列已在渤中作业区、恩平作业区、陵水作业区、惠州作业区等多个平台得到广泛应用。

Energy management system (EMS) is a comprehensive automatic control system for power generation, transmission, transformation, distribution and power consumption. Its functions include generator set management and control, power grid active and reactive power flow and voltage control, key equipment monitoring and remote control, power grid online stability control, power grid operation heat reserve margin management and critical load comprehensive control and other functions. At present, the company has the ability to formulate stability strategies for island power station platforms and multi-platform power networks, and master key technologies such as load management, power dispatching, large load suppression, low-voltage equipment management, and fault trip management. The products are available for a variety of fields such as wellhead platforms, power platforms, central platforms and land treatment terminals. At present, the product series has been widely used in Bozhong working area, Enping working area, Lingshui working area, Huizhou working area and other platforms.

基本参数 Basic Parameter

	EMS 1.0	EMS 2.0	EMS 3.0
适用场所 Applicable to the platform	无发电机设施 No generator	有发电机设施 Including generator	中心站设施 (有发电机且布置服务器) Including generator and server
主控制柜数量 main control cabinet Number	1-2	2	2+1
单面柜体积 Single side cabinet volume	800*800*2100mm	800*800*2100mm	800*800*2100mm
远程I/O站数量 remote I/O station Number	2-3个	4-5个	5-6个
系统点数 system Number	500-700点	700-900	900-1000
HMI幅数 HMI Number	>30	>50	>100

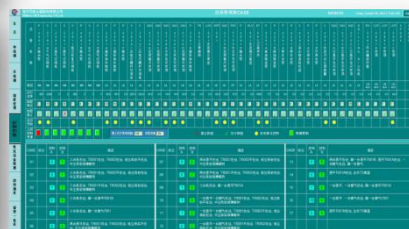
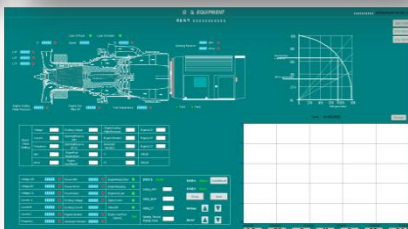
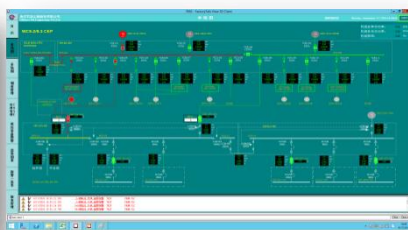
技术规格 *Specification*

CPU负载率	CPU load rate	正常状态下小于30%，满负荷工况下小于50%
负载脱扣时间	Load trip time	≤120ms
冗余配置	Redundant configuration	电源冗余、CPU冗余、网络冗余
通讯接口	Communication interface	支持Modbus RTU、Modbus TCPIP、Profibus等
工控网络安全	Industrial control network securit	符合等保2.0 二级网络安全标准
设计寿命	Design Life	>30 years

应用场景 *Application scenario*

电能管理系统（EMS）系列产品可应用于非电站平台、电站平台、中心站平台等各种平台设施上。主要具有以下功能：

- ✓ 单线图查看 Single line chart view
- ✓ 断路器控制 Circuit breaker control
- ✓ 变压器调节 Transformer regulation
- ✓ 负荷管理 Load management
- ✓ 优先级设置 Priority setting
- ✓ 调度管理 Scheduling management
- ✓ 大负载抑制 Heavy load suppression
- ✓ 低压设备管理 Low voltage equipment management
- ✓ PM表数据显示 PM table data display
- ✓ 趋势图表 Trend chart
- ✓ 报警一览表 Alarm list
- ✓ 报表管理 Report management



控制系统产品 Control system products

电能管理系统/EMS

商务参数 *Application Scope*

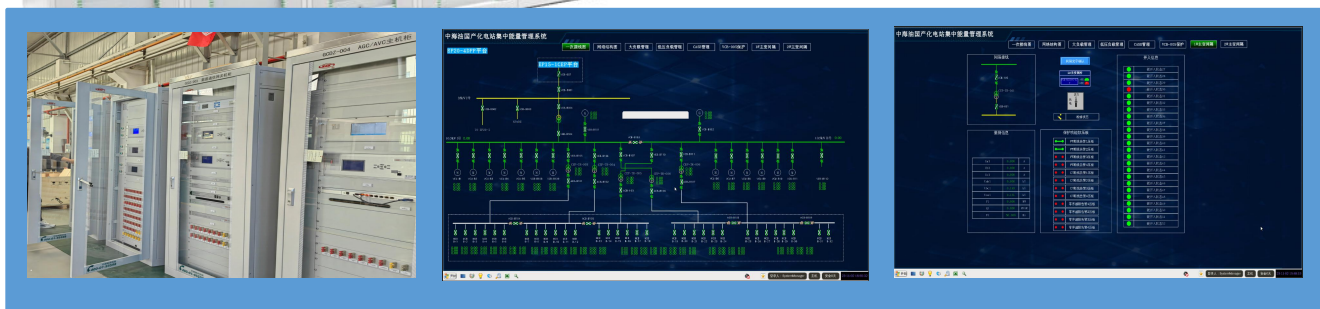
产品服务类型	Product Type	EPCI
供货周期	Supply Cycle	4-5 months

可付费项服务 *Paid Services*

电力组网安稳策略和控制策略制定 老平台EMS系统改造升级	Power network security strategy and control strategy development Digital services
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工程业绩 *Project performance*

时间/YEAR	项目名称/NAME	数量/SET
2017年	文昌项目/Wenchang	1
2021年	秦皇岛项目/Qinhuangdao	6
2022年	陆丰项目/Lufeng	1
2022年	渤中项目/Bozhong	1
2022年	恩平项目/Enping	1
2023年	惠州项目/huizhou	1
2024年	崖城项目/Yacheng	1
2024年	文昌项目/Wenchang	2



概述 Overview

结合海上平台及岸电接入后海上油气田电网的技术需求，应用综合保护测控装置、稳控装置、AGC/AVC技术，实现油田群电能管理对发电机组、负载、变压器、海缆等设备的一体化管控。综合自动化管理系统通过国产化监控组态平台实现海洋平台设备的运行监视、操作与控制、智能应用等。

The comprehensive automation management system combines the technical requirements of offshore platforms and shore power integration into the offshore oil and gas field power grid, and applies comprehensive protection and measurement devices, stability control devices, AGC/AVC technology to achieve integrated control of power generation units, loads, transformers, submarine cables and other equipment in oilfield group energy management. The comprehensive automation management system realizes the operation monitoring, operation and control, intelligent application, etc. of marine platform equipment through a domestically produced monitoring and configuration platform.

基本参数 Basic Parameter

	安全稳定控制柜 control cabinet	数据通信网关柜 Network cabinet	AGC/AVC主机柜 Generator control cabinet
主控制柜数量 main control cabinet Number	1-2	1	1
单面柜体积 Single side cabinet volume	800*800*2100mm	800*800*2100mm	800*800*2100mm
额定电压 Rated Voltage	AC 220V	AC 220V	AC 220V
装置类型 Device Type	采集执行单元、继电保护装置、安全自动装置、多功能测控装置等 Data acquisition execution unit, relay protection device, safety automatic device, multi-function measurement and control device, etc.		

技术规格 *Specification*

一体化监控主机 **Integrated monitoring host:**

实现全站设备运行监视、操作与控制、智能应用等。

安全稳定控制系统 **Security and stability control system:**

由主站及子站等不同站点的多套安全稳定控制装置构成，接入模拟量并提供通讯接口。

保护子系统 **Protected subsystem:**

包括进线公用测控屏、保护测控屏等。

应用场景 *Application scenario*

1. 岸电接入平台中，推广综合自动化系统 (IAS)

Promote the Integrated Automation System (IAS) in the shore power access platform

2. 提供电站平台/岸电平台集中控制系统 (综合自动化管理+稳定控制管理)

Provide centralized control system for power station platform/shore power platform (comprehensive automation management+stable control management)

以上系统/设备选型、设计、策略制定等

The selection, design, and strategy formulation of the above systems/equipment.

商务参数 *Application Scope*

产品服务类型 **Product Type**
供货周期 **Supply Cycle**
第三方认证 **Third-party Certification**

EPCI
8~10 months
CCS、DNV



兹证明上述所列产品的本组别检验合格，符合上述证书标准的要求。
This is to certify that the following products have been inspected by the undersigned surveyor of the Society and are found to comply with the requirements of the specified standards.

产品名称 **Product Name** 电站管理系统
申请方 **Applicant** 中海石油工程股份有限公司特种设备分公司
制造商 **Manufacturer** 中海石油工程股份有限公司
产品编号 **Product No.** 01220201101
批准日期 **Date of Issue** 2023.05.23
有效期至 **Valid Until** 2025.05.23
证书编号 **Certificate No.** T23ZVPS01101_01

1. 国家强制性《海上固定平台安全规范》(3000)
Safety Rules for Offshore Fixed Platform(2009), State Economy and Trade Committee of P. R. China
2. 制造商提供的技术规范
The IT program provided by manufacturer
设备认证类别: 02, Equipment Certificate Category: B.

产品照片 **Product Photo** 请贴在上述证书的模板上 / to the template of the product
检验员 **Inspector** 李强
日期 **Date of Issue** 2023.05.23
有效期至 **Valid Until** 2025.05.23
证书编号 **Certificate No.** T23ZVPS01101_01

证书编号/Certificate No. T23ZVPS01101_01

产品描述/ Product Description			
中电系统/Control Control System(00001)			
名称/Name	属性 (值) /Attribute	单位/Unit	
型号/Type	000C-G22 (安全稳定控制柜001)	台	2
数量/Quantity	1	台	1
额定电压/Nominal Voltage	AC220	V	1
产品编号/Serial No.	E1P02021101		
中电系统/Control Control System(00002)			
名称/Name	属性 (值) /Attribute	单位/Unit	
型号/Type	000C-G22 (安全稳定控制柜002)	台	1
数量/Quantity	1	台	1
额定电压/Nominal Voltage	AC220	V	1
产品编号/Serial No.	E1P02021102		
中电系统/Control Control System(00003)			
名称/Name	属性 (值) /Attribute	单位/Unit	
型号/Type	000C-G22 (收发通信网关柜)	台	1
数量/Quantity	1	台	1
额定电压/Nominal Voltage	AC220	V	1
产品编号/Serial No.	E1P02021103		
中电系统/Control Control System(00004)			
名称/Name	属性 (值) /Attribute	单位/Unit	
型号/Type	000C-G22 (AC/DC主机柜)	台	1
数量/Quantity	1	台	1
额定电压/Nominal Voltage	AC220	V	1
产品编号/Serial No.	E1P02021104		

试验项目/Scope of Testing and the Result
对产品进行了检验，项目包括：1. 外观检查；2. 绝缘电阻测试；3. 保护电路有效性检查；4. 功能测试。检验结果满足上述规定的要求。
The inspection to the products was carried out as below: 1. Visual inspection; 2. Insulation resistance inspection; 3. Protective circuit effectiveness inspection; 4. Function test. The inspection results complied with the requirements of the specified standards.

责任声明/Statement of Responsibility
本证书的有效性依赖于制造商提供的技术文件和工厂的认可制度。本证书与制造商或其分包方的责任无关。本证书不能免除制造商或其分包方在制造过程中应承担的任何法律责任。
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中国船级社天津分公司
CCS Tianjin Branch



概述 Overview

本系统通过对海洋石油平台配电系统的中高压配电盘、变压器、低压盘以及UPS等配电设备数据进行采集，融合现场总线、网络通讯、云服务和大数据等技术，实现海洋油气田配电系统远程全参数实时监控、故障诊断、变定期维护为预防性维护，进一步提高电力系统运行效率及安全性，减少运维成本。本产品适用于适用于各类海上固定平台及FPSO的智能化建设或改造，在恩平18-6、渤中19-6及惠州26-6等多个项目中成功应用。

The system collects data of medium and high voltage distribution boards ,transformers,lower voltage distribution boards UPS and other distribution equipment .it is integrated with technologies such as field-bus, network communication, cloud services, and big data to achieve realize remote full-parameter real-time monitoring, fault diagnosis and change regular maintenance to preventive maintenance of offshore oil and gas field distribution system, so as to further improve the operation efficiency , safety and stability of power system and reduce operation and maintenance costs.This product is suitable for the intelligent construction and Intelligent Improvement of fixed offshore platforms and FPSOs.It has been successfully applied in multiple projects such as the EP18-6 ,BZ19-6 and HZ26-6.

中高压盘

- 触头夹紧力在线监测
- 局放监测
- 无线测温
- 红外监测
- 弧光监测
- 火灾极早期
- 触头插入深度监测

低压盘

- 无线测温
- 绝缘监测
- 红外测温
- 火灾极早期
- ACB开关监测
- 电力监测
- 弧光监测

变压器

- 局放监测
- 声纹监测
- 振动监测
- 红外热成像
- 铁心接地监测
- 风机温控器
- 电力监测

BASIC PARAMETERS 基本参数

	服务通信柜 control cabinet	操作员台 operator station
柜体数量 cabinet Number	1	1
单面柜体积 Single side cabinet volume	800*800*2100mm	800*800*1000mm
额定电压 Rated Voltage	AC 220V	AC 220V
装置类型 Device Type	串口服务器、网闸、交换机、KVM切换、实时服务器、历史服务器、操作员站、显示器等 Serial server, gateway, switch, KVM switch, real-time server, history server, operator station, display, etc.	

控制系统产品 Control system products

电气设备在线监测系统/EEMS

SPECIFICATION 技术规格

服务通信柜供电电压	Power supply voltage of Server cabinet	AC230V
操作员站供电电压	Power supply voltage of Operator Station	AC2300V
CPU负载率	Server CPU load rate	正常情况下，服务器平均负荷率下小于15%， 操作员站平均负荷率下小于30%，
通讯接口	Communication interface	支持Modbus RTU、Modbus TCP/IP等
系统存储容量	System Storage Capacity	历史数据存储时间不少于2年
工控网络安全	Industrial control network security	符合等保2.0 二级网络安全标准
设计寿命	Design Life	>25 years

APPLICATION SCOPE 应用范围

新平台智能化建设	Intelligent Construction for New Platform
在役平台智能化改造	Intelligent Improvement for In-service Platform

BUSINESS PARAMETERS 商务参数

供货周期	Supply Cycle	3~5 months
产品服务类型	Product Type	EPCI&After Sales Service

PROJECT ACHIEVEMENT 工程业绩

时间/YEAR	项目名称/NAME	数量/SET
2022年	恩平项目/Enping	1
2023年	渤中项目/Bozhong	1
2023年	惠州项目/Huizhou	1

AFTER-SALES SERVICE

通过多年的积累，目前已有一支技术过硬的售后队伍，充分服务于公司产品的质保工作，一旦在质保期内设备出现运行故障或备品备件更替问题，能够在第一时间响应并开展相关故障排查、部件更换等工作，最大程度降低因设备原因对平台生产造成的影响，并收集现场问题，避免以后交货设备出现类似问题，使公司产品形成闭环管理。



Through years of accumulation, there is currently a well-skilled after-sales team that fully serves the quality assurance work of the company's products. Once the equipment fails during the warranty period or the replacement of spare parts, it can respond in the first time and carry out related troubleshooting and component replacement. Work to minimize the impact of equipment on production, and collect on-site problems to avoid similar problems in future delivery equipment, so that the company's products form a closed-loop management.

