



SMIE
Sealong Marine Engineering

INTRODUCTION 企业概况

With over 15 years of experience in corrosion protection of hull structures and marine growth prevention, Sealong Marine Engineering (SME) offers unparalleled expertise and an exceptionally high level of service in marine industry. Impressed Current Cathodic Protection system (ICCP) and Marine Growth Prevention System (MGPS), as our core technological products, are proved widely as the ultimate and most economic solutions against corrosion and bio-fouling.

Plate Heat Exchanger service, as the 2nd main business of SME, is provided to many ship owners in Mainland China. Certified with ISO9001 & ISO14001, SME is able to provide professional service of design, retrofit, modification, inspection, cleaning as well as complete set equipment & spare part supply.

Furthermore, guided by our high-quality control principle for our main business, SME is also known by ship's owner & management companies as a hub of store / spare part trading, port logistic & technical repair service. SME is willing to benefit all customers more with our professionalism & accumulating experience!

SME公司在海洋防腐蚀防污染领域有着超过十五载的经验积累，我们的外加电流阴极防腐(ICCP)和防海生物系统(MGPS)可以给您提供经济有效的防腐防污解决方案。

随着公司专业板式换热器(PHE)服务车间在南通的建成，SME的板式换热器服务有了长足的发展。已经通过ISO9001质量认证体系和ISO14001环保管理体系的服务车间可以提供包括设计，改装，检测，清洗在内的专业服务，以及全套换热器设备和备件의供应。

同时，鉴于SME公司对自有品牌产品和服务的高品质要求，我们的部分客户也将SME公司视为其中国大陆的服务集成商，提供各种船舶备件、物料供应、港口物流及技术维修服务。

矢志不渝创新，技术与艺术相融，我们期待为更多的国内外客户提供始终如一的优质产品和服务！

MAJOR CUSTOMERS 主要客户



CONTENTS

目录

-  **CORROSION
PROTECTION SYSTEM**
-  **PLATE HEAT EXCHANGER**
-  **SPARE PART TRADING**
-  **ICCP SERVICE**

I.C.C.P System

Spare Parts & Technical Service 备件供应与技术服务

SME能够提供全球各大品牌的ICCP系统检修服务和相应型号的替换备件，包括：

- ❑ ICCP装置辅助阳极，参比电极、阳极屏蔽层涂料及恒电位仪
- ❑ ICCP装置维修和系统维护保养
- ❑ ICCP装置的系统运行分析

品牌包括但不限于：KC, Nippon Corrosion (CAPAC), CATHELCO (Jotun), ACG, WILSON WALTON(CORRPRO) 等等



Anode before service
维修更换前的阳极



Anode after service
维修更换后的阳极



参比电极
Reference Cell



参比电极
Reference Cell



圆型阳极
Circular Anode



长条型阳极
Linear Stripe Anode



Silver Brush 银碳刷



Brush Holder 碳刷架



Shaft Monitor 毫伏表



Slip Ring 滑环

作为ICCP的组成部分，我们也提供整套的轴接地系统设备，包括一组90%含银量可按客户要求尺寸定制的碳刷，碳刷架，铜制包银滑环。这套高质量的备件拥有良好的导电性能，能最大效率的避免轴的腐蚀损坏。我公司还最新开发了具有双向检测和延伸报警的毫伏表装置，能有效地检测轴接地的保护电位。

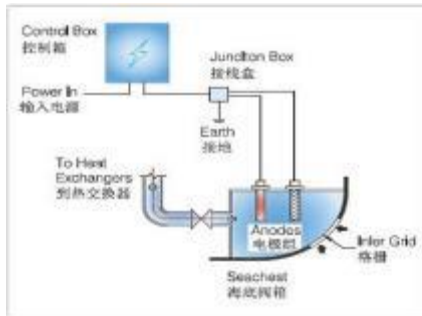
M.G.P.S. System

Spare Parts & Technical Service 备件供应与技术服务

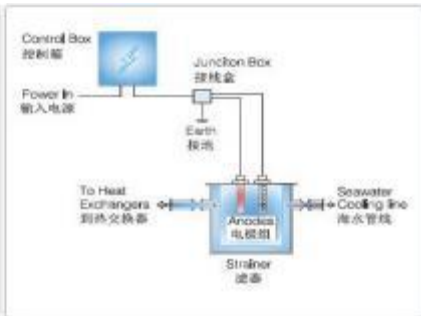
- We provide design, retrofit, modification, repair, maintenance, performance analysis as well as spare part supply for most of famous manufacturers of MGPS system all over the world
- We provide full solution & turn key project for SME MGPS system & equipment
- 我们能够提供全球各著名品牌的MGPS备件，以及MGPS装置的检修，系统维护保养和运行分析
- 我们可按客户要求制作，供应任何尺寸和材质的电极和配套设备

Installation Type 安装方式

Sea chest Anode Diagram
海水阀箱安装方式



Strainer Anode Diagram
过滤器安装方式



System Composition 系统组成

The MGPS system comprises Anti-fouling anode, Anti-corrosion anode, Control Panel, Junction Box, etc.

电解防污防腐装置由电源控制箱、防海生物电极、防腐蚀电极、接线盒组成。

Electrolytic Anode 电解电极

Available anodes include: Cu alloy anode, Al alloy anode, Fe alloy anode, Ru-Ti-Ir anode...etc

电极材质包括：铜电极、铝电极、铁电极、钛-钌-铱电极等。



Sacrificial Anode

Sacrificial Anodes 牺牲阳极

We fabricate & supply Bolted/Welding type Zinc/Aluminum anode with any dimension or weight as per you drawing, providing CCS Class Certificate as needed

我们可按客户要求生产供应相应尺寸的螺栓式或焊接式铝块或锌块，并根据需求出具CCS船级社证书。

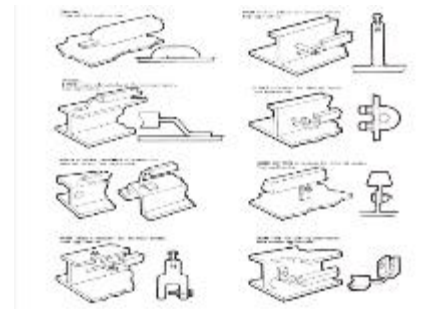
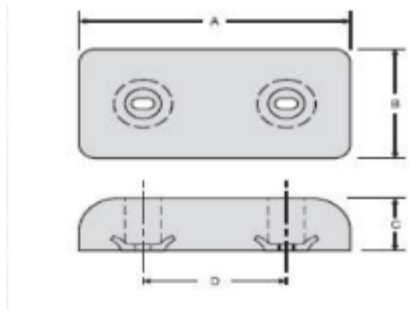
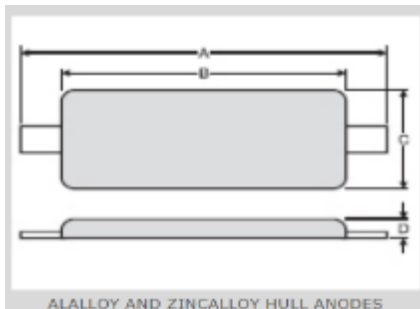
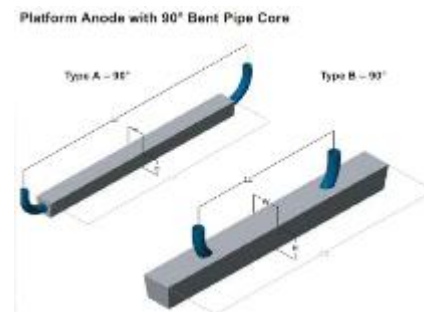
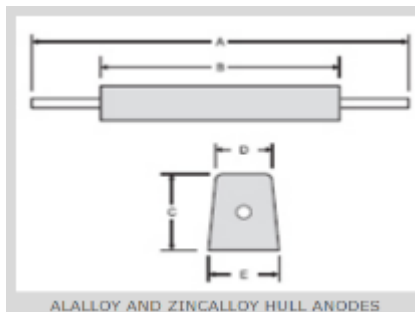
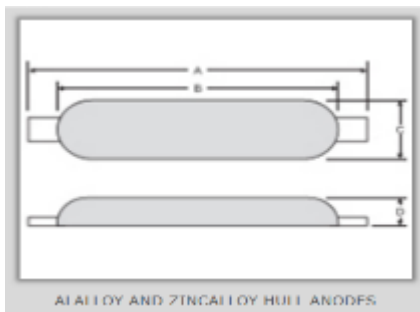


Plate Heat Exchanger

1. Plate Heat Exchanger 板式热交换器

We supply complete machine and spare parts like plate and gasket, strainer, rubber boost...etc, for almost all popular manufacturers, including Alfa Laval, GEA, APV, HISAKA, Tranter, Sondex, Schmidt, VICARB...etc.

SME可供应各大品牌的整台板式热交换器机组或备件，如板片，胶垫，过滤器，橡胶翻边等。

1.1 Plate Material 板片材质

Austenite Stainless Steel: 304, 316L, 904L, SMO254 不锈钢

Titanium & Titanium Alloy: Ti, Ti-Pd 钛和钛合金

Nickel & Nickel Alloy: Hastalloy C-276, Monel, Inconel 镍和镍合金

1.2 Gasket Material 胶垫材质

NBR (*Nitrile*) 丁腈橡胶

Temperature Range: 0-110 °C

LP-NBR (*Low Pressure Nitrile*) 硫化丁腈橡胶

Temperature Range: 0-80 °C

EPDM (*Ethylene-Propylene-Diene Monomer*) 三元乙丙橡胶

Temperature Range: 0-160 °C



Production List 产品列表

Alfa Laval

M3 M6 M10B M10M M10BW M15B M15M M15B M20M MX25B
MX25M M30 TL6B TL10B T20B T20P T20M TS6M TS20M P22
P26 P36 A10 AM10 A15 A15B A20 A20B AK20 AM20 AM20B
AX30 AX30B GEAVT04P VT10F VT20-C VT20-G VT20P VT40-
C VT40-G VT40 P/M VT40P VT80-C VT80-G VT80M VT80P
NT50T NT50X NT50M NT100T NT100M NT100X NT150S
NT150L NT250S NT250L NT350S etc

APV

A055 A085 H17 J060 J092 J107 M60 M92 M107 N35-C N35-G
N25 SR14AP etc
Tranter
GX12 GX018 GX026 GX042 GX051 GX064 GX091 GX060
GX100 GX140 GX180 GX085 GX145 GX185 GX205 GL085
GL145 GL205 GC016 GC026 GC051 GC054 GC060 etc

Sondex

S8 S15 S20 S21 S22 S30 S35 S37 S38 S39 S41 S43 S47 S50
S62 S64 S65-C S65-G S120/121 S187/188 S4A S7A S8A S14A
S20A S21A SFD13/23 etc

LHE

HT02 HT03 HT061 HT062 HT062 HT064 HT081 HT082 HT083
HT101 HT102 HT103 HT104 HT121 HT122 HT123 HT150
HT151 HT152 HT153 HT154 HT200 HT201 HT202 HT203
HT204 HT206 HT207 HT231 HT232 HT233 HT234 HT235
HT235 HT301 HT302 HT303 HT304 HT305 HT311 HT312
HT313 HT316 HT351 HT352 HT353 HT354 HT356 HT358
HT359 HT451 HT452 HT453 HT454 HT501 HT502 HT503
HT50T etc.

HISAKA

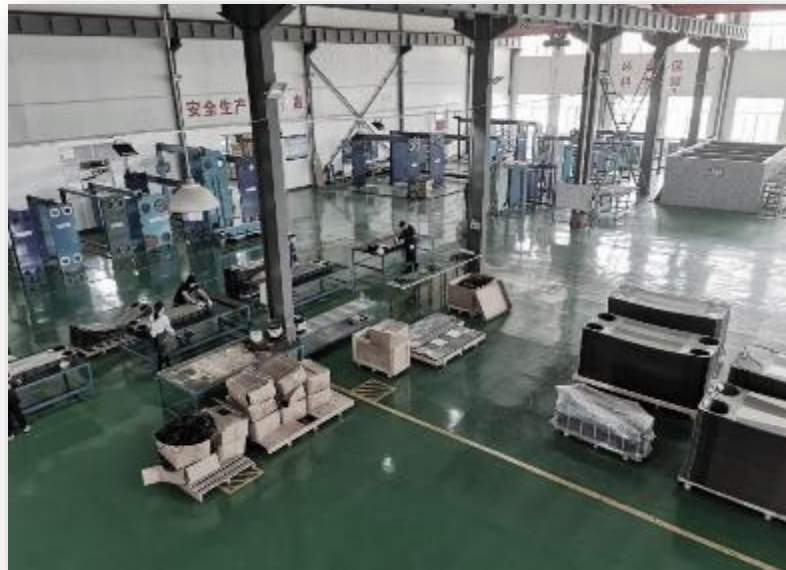
EX11 EX15 LX20 LX40 LX00 LX10 LX20 LX30 LX40 LX50
RX10 RX11 RX30 RX70 UX10 UX20 UX30 UX40 UX10 UX20
UX30 UX40 UX80 UX90 SX40(41) SX40A etc

Plate Heat Exchanger

2. PHE Professional Service 板式热交换器专业服务

SME has our own professional team for Plate Heater Exchanger (PHE) with abundant experience on multi brands exchangers including CIP cleaning, workshop chemical cleaning as well as frame & inner strainer modification on any manufacturer's PHE.

SME的自有服务团队可以提供各大品牌厂商的专业现场及车间的清洗服务；同时也能够提供过滤器及框架挡板的改装服务。



ISO 9001
Certificate



ISO 14001
Certificate

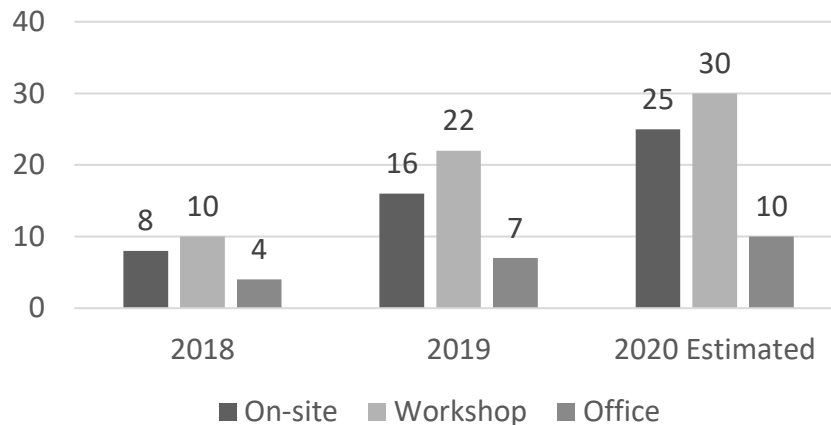


Plate Heat Exchanger

2.1 PHE Service Team 板冷服务团队



Team member number 团队人数



■ **On-site Service Engineer 现场服务工程师**
on board technical service 负责现场拆装及现场清洁服务

■ **Workshop Worker 工厂技师**
cleaning & regluing the gasket 负责工厂清洗及垫片安装

■ **Office Operator 运营团队**
communication & documentation 负责项目沟通及文件制作

Plate Heat Exchanger

2.2 Plate 板片配件优势

SME has our advantage in supplying OEM PHE plate (Titanium or Stainless Steel) for regular type since we keep stock in our workshop and we provide 12m warranty for our serviced projects.

SME有一部分通用型号的板片库存，这使得我们能够提供更及时的备件供应服务；另外，经过我们车间清洗和安装的板片还可以获得从安装日起算的12个月质保期，这使得我们的服务优势凸显。

	Genuine	SME	Other
Cost	★	★★★★	★★★★★
Lead time	★	★★★★★(0-15D)	★★★
Product Guarantee	★★★★★	★★★★★(12M)	★
Service Guarantee	★★★★★	★★★★★(12M)	★
Remark:	No special document (non-military license) needed for SME OEM parts		

2.3 Gasket 胶垫配件优势

SME is able to provide gasket from either Genuine maker or OEM factory, and we provide the same product and service guarantee for both products in our serviced project.

SME可以提供原装胶垫或者国产胶垫供客户选择使用，不论是原装的胶垫还是国产的胶垫，只要客户委托我们进行清洗服务并使用我们提供的胶垫，我们都会提供安装日起算的12个月质保期。

	Genuine Gasket	OEM Gasket
Cost	★	★★★
Lead time	★★(7-90D)	★★★★★(3-15D)
Product Guarantee	★★★★★(12M)	★★★★★(12M)
Service Guarantee	★★★★★(12M)	★★★★★(12M)
Remark:	Use SME PHE service to avoid argue for the spares quality & service quality	

Other Heat Exchanger

3. Air-Cooler 空气冷却器

We are able to provide standard type air-cooler for diesel engine of famous manufacturers, including R&W / MAN / YAMA / SULZER / MARK / DEUTE / STEYR / COMMINS...etc, or tailor-made special air-cooler according to customer's drawing & specification.

我们供应多种型号的柴油机配套空气冷却器，用于冷却柴油机增压空气，能成倍的提高柴油机工作效率。产品可配套于R&W / MAN / YAMA / SULZER / MARK / DEUTE / STEYR / COMMINS等引进型柴油机，或者根据客户需要的图纸进行加工定制。



4. Atmospheric Condenser 大气冷凝器

Our main product is condenser of horizontal shell and straight tubes type: the ends of the cooling tubes are connected separately to left and right tube plates by mass of expansion. Left and right tubes plates are linked to the covers with bolts and collar bolts.

主要产品为卧壳直管壳体膨胀式冷凝器：冷却管两端分别胀接在左右管板上，左右管板与水箱端盖用螺栓及环节螺栓连接，壳体上没有蒸汽进口接管和凝水出口接管；冷却水在管内流动，蒸汽在壳体内沿隔板形成回路作横跨管束流动进行热交换，主要用于大气冷凝。

5. L.O. / F.W. Cooler 滑油/淡水冷却器

Other products, such as BLG, LOG series lubricating oil / fresh water cooler, is used to cool lubricating oil or fresh water of diesel engine. Coolers are also of horizontal shell and straight tubes type.

其他的产品如BLG，LQG系列滑油、淡水冷却器，主要用于冷却柴油机滑油或淡水。





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