



海洋卫士® 压载水处理系统

OceanGuard® Ballast Water Management System

青岛海德威科技有限公司
HEADWAY TECHNOLOGY CO.,LTD.

关于我们 ABOUT HEADWAY



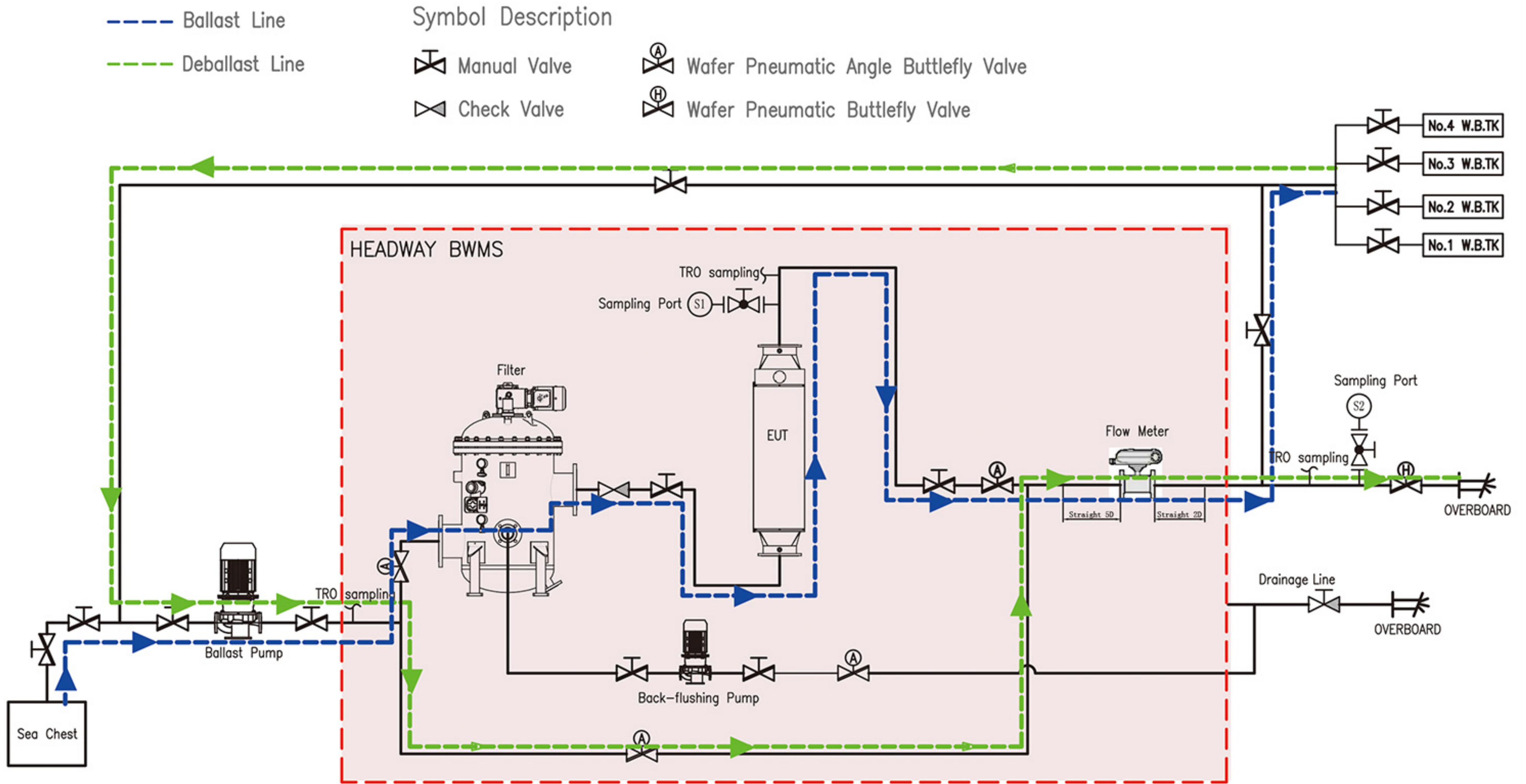
- 青岛海德威科技有限公司是一家以科技创新为宗旨的高新技术企业，专业从事于研发、生产、销售高端船舶配套产品，并提供全球范围专业售后服务。
- 公司总部设立于中国青岛，在青岛高科技园建立了独立的研发中心和生产基地，其船舶压载水处理系统年产能1000船套。国内设立上海分公司，广州、深圳、大连、舟山、山海关、南通、天津等15个分支机构，同时在全球56个国家和地区建立了120多个销售及售后服务网点，形成了完善的全球服务体系。
- 公司秉承服务、创新、共赢的企业精神，坚持成就客户、对新技术充满热情的企业价值观，正直诚信、坚持不懈，勇于迎接挑战。
- Headway Technology Co., Ltd. is a high-tech enterprise that takes technological innovation as the purpose, specializes in professional R&D, manufacturing and sales of high-tech marine accessories and provides worldwide professional after-sales service.
- Headquartered in Qingdao, China, Headway has set up an independent R&D center and production base in Qingdao High-tech Park with an annual production capacity of 1,000 sets. Furthermore, Headway has also established one subsidiary company in Shanghai, branch offices in Guangzhou, Shenzhen, Dalian, Zhoushan, Shanhaiguan, Nantong, Huangdao, etc. and a comprehensive global service network composed by more than 120 service stations across 56 countries/regions.
- "Service, Innovation and Win-win", Headway commits to satisfying customers, pursuing new technology with sincerity, perseverance and courage.



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工作流程图

Flow Diagram



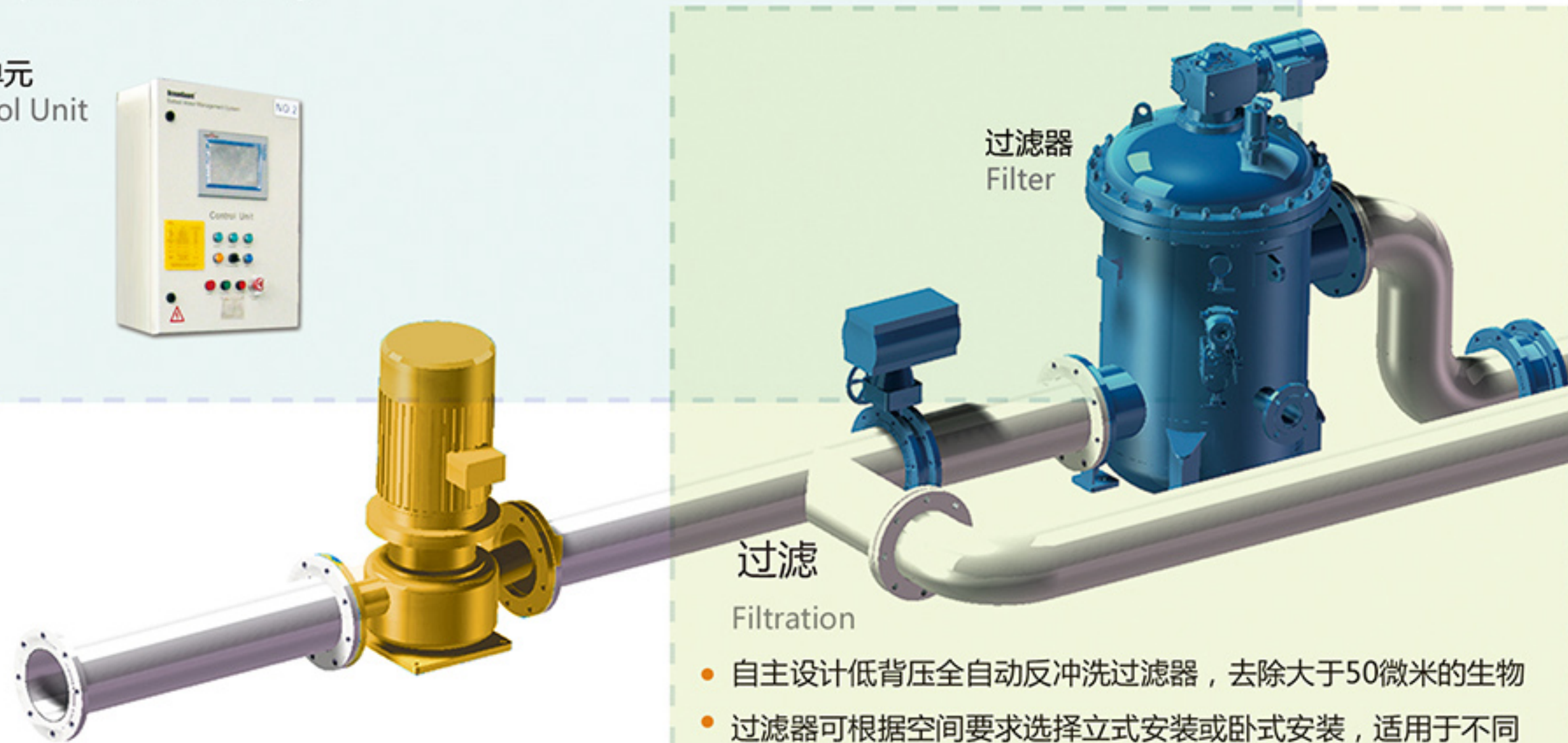
*EUT : 电催化杀菌单元 Electrocatalysis Ultra Treatment Unit

控制单元

CONTROL UNIT

- 具备本地、远程双向控制功能；输出系统报警信息到船舶控制系统并实时显示各设备运行状态；采用西门子PLC可编程控制器，可以实时采集和处理与连接所有设备信息；保留存储至少24个月有效数据，可随时打印；一键式操作，方便用户使用。
- BOTH LOCAL AND REMOTE CONTROLS
Alarm information can be output to the vessel's control system.
Siemens HMI, which can display the operation status of each component in real time;
Siemens PLC, which can collect and deal with all related data of BWMS in real time;
Keep and store effective data for at least 24 months, which can be printed out at any time;
One-key operation, user friendly.

控制单元
Control Unit

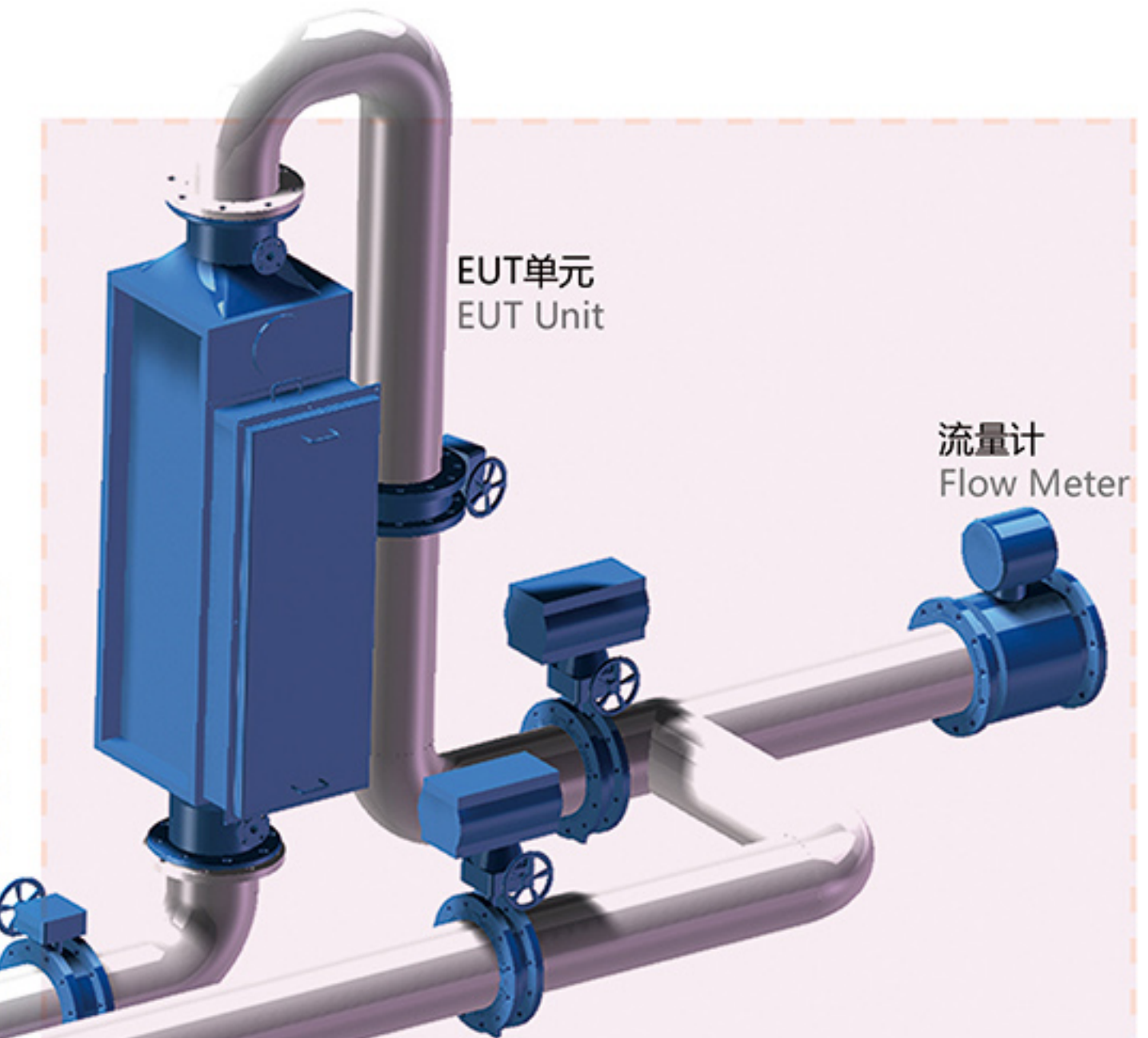


过滤器
Filter

过滤

Filtration

- 自主设计低背压全自动反冲洗过滤器，去除大于50微米的生物
- 过滤器可根据空间要求选择立式安装或卧式安装，适用于不同多种船型的营运船改装。
- Independently designed low back-pressure filter with automatic back-flushing, removes organisms larger than 50µm.
- As the filter can be installed either vertically or horizontally, this flexibility provides ease in retrofitting for existing vessels.



EUT单元
EUT Unit

流量计
Flow Meter

电催化高级氧化技术 (AEOP)

Advanced Electro-catalysis Oxidation Process (AEOP)

- 利用电子激发特殊的半导体材料，使水分子形成高活性的羟基自由基($\cdot\text{OH}$)，通过破坏生物的细胞膜来杀死水中的微生物、细菌及病毒。
- By adopting electron excitation to special semiconductive material, highly active Hydroxyl Radicals ($\cdot\text{OH}$) will be produced from water molecules. The Hydroxyl Radicals kill micro-organisms, bacteria, and viruses in water by destroying cell membrane.

型式认可

Type Approval

海洋卫士®压载水处理系统--证书最齐全的压载水处理系统
 OceanGuard® BWMS -- the most comprehensive Type Approved system

14项权威机构型式认可

Type Approved by 14 International Classification Societies



ABS



BV



CCS



DNV-GL



IMO



IRAN



KR



LR



Liberia TAC



NK



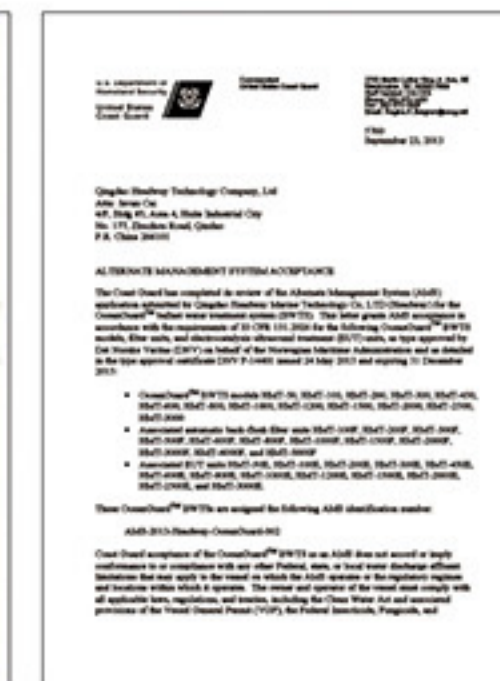
NL



RS



RINA



USCG AMS

海洋卫士®的优势

Advantages of OceanGuard® BWMS



OceanGuard® Ballast Water Management System



耗能低

Low Power Consumption

处理1000m³水，功耗仅为17KW

Consumption is approx. 17 KW for the treatment of 1,000m³ of ballast water.



安全无腐蚀

Safe & Non-corrosion

无氢气，氯气等有害副产物产生，对船体无腐蚀

No harmful by-products like H₂ or Cl₂, and no corrosion to the hull.



高效杀菌

Highly effective sterilization

杀菌彻底，符合USCG标准

Complete sterilization, meeting USCG standard.



体积小

Small Footprint

结构紧凑，安装简便，适用多种船型

Compact design ensures flexible installation for vessels of all types and sizes.

海洋卫士® 过滤器规格

OceanGuard® Filter Specification



型号 Type	容积(L) Volume	尺寸(MM) Dimension			流量范围(M ³ /H) Flow Range
HMT-100F	120	650	565	1445	10-150
HMT-200F	205	800	670	1600	10-250
HMT-300F	300	900	780	1705	50-400
HMT-500F	450	980	780	1705	50-550
HMT-600F	650	1060	895	2330	50-700
HMT-800F	860	1180	1015	2380	50-900
HMT-1000F	1100	1300	1115	2530	50-1100
HMT-1500F	1490	1440	1230	2610	100-1600
HMT-2000F	1900	1500	1230	3260	100-2100
HMT-3000F	2500	1700	1455	3480	100-3100
HMT-4000F	4000	1900	1675	3600	100-4500
HMT-5000F	5900	2100	1915	4050	100-5500

海洋卫士® 过滤器规格 OceanGuard® Filter Specification



型号 Type	容积(L) Volume	尺寸(MM) Dimension			流量范围(M ³ /H) Flow Range
S-ZF1-V	140	695	630	1105	10-150
S-ZF2-V	145	695	630	1105	10-260
S-ZF3-V	176	695	630	1301	50-390
S-ZF4-V	595	995	810	1676	50-650
S-ZF5-V	595	995	810	1676	50-780
S-ZF6-V	690	981	810	1828	50-1040
S-ZF7-V	690	981	810	1828	50-1300
S-ZF8-V	1440	1275	1110	2020	50-1560
S-ZF9-V	1440	1275	1110	2020	100-1950
S-ZF10-V	1528	1417	1260	1985	100-2600
S-ZF11-V	1892	1417	1260	2273	100-3250
S-ZF12-V	1892	1417	1260	2273	100-3900
S-ZF13-V	2750	1670	1440	2460	100-5220

EUT单元 EUT Unit



海洋卫士® EUT单元规格 OceanGuard® EUT Specification

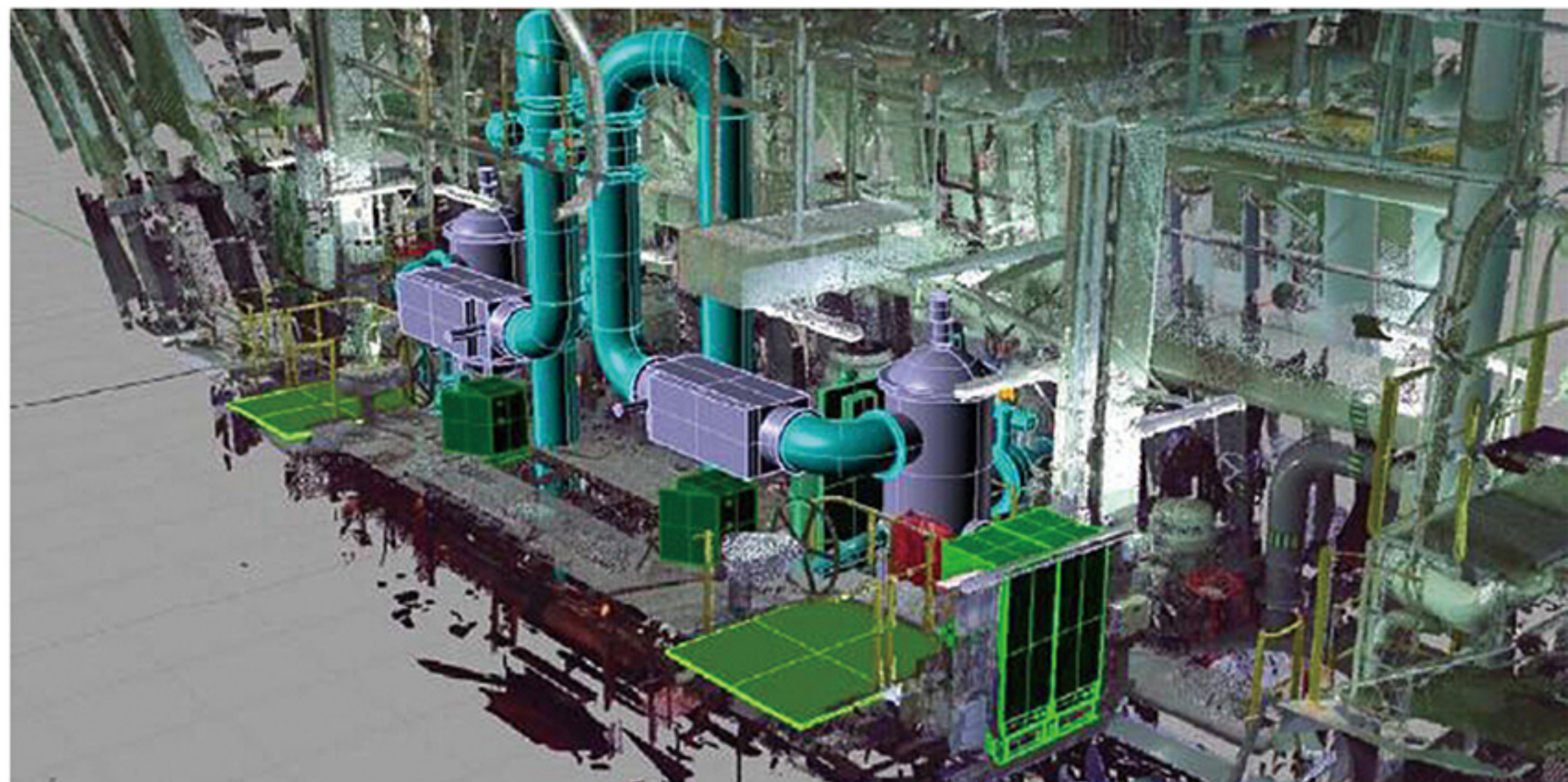
型号 Type	功率 (KW) Power ConsumptionW	尺寸 (MM) Dimension			处理范围 (M ³ /H) Capacity Range
50	0.8	381	445	1530	10-65
100	1.5	381	445	1530	10-130
200	3	381	527	1530	20-260
300	4.5	426	612	1701	30-390
450	6.8	456	707	1821	30-585
600	9	505	707	1957	50-780
800	13	505	844	1957	50-1040
1000	17	605	817	2123	50-1300
1200	21	605	892	2123	50-1560
1500	25	663	884	2208	50-1950
2000	34	663	1022	2208	100-2600
2500	42	695	1187	2212	100-3250
3000	52	695	1187	2222	100-3900
4000	69	695	1187	2222	100-5200

* Power Consumption Regular Sea Area

改装优势

Retrofitting Advantages

- 适用各种船型 / Suitable for vessels of all types
- 结构简单，便于安装 / Simple structure and flexible installation
- 占地面积小，电负荷小 / Small footprint and low power consumption
- 一站式服务 / One-stop service



改装工作流程

Retrofitting Process

4/21周 Weeks

- 实船勘查/3D扫描
Onboard Inspection/3-D Scanning
- 制定改装计划
Schedule Planning
- 费用评估
Quotation

15/21周 Weeks

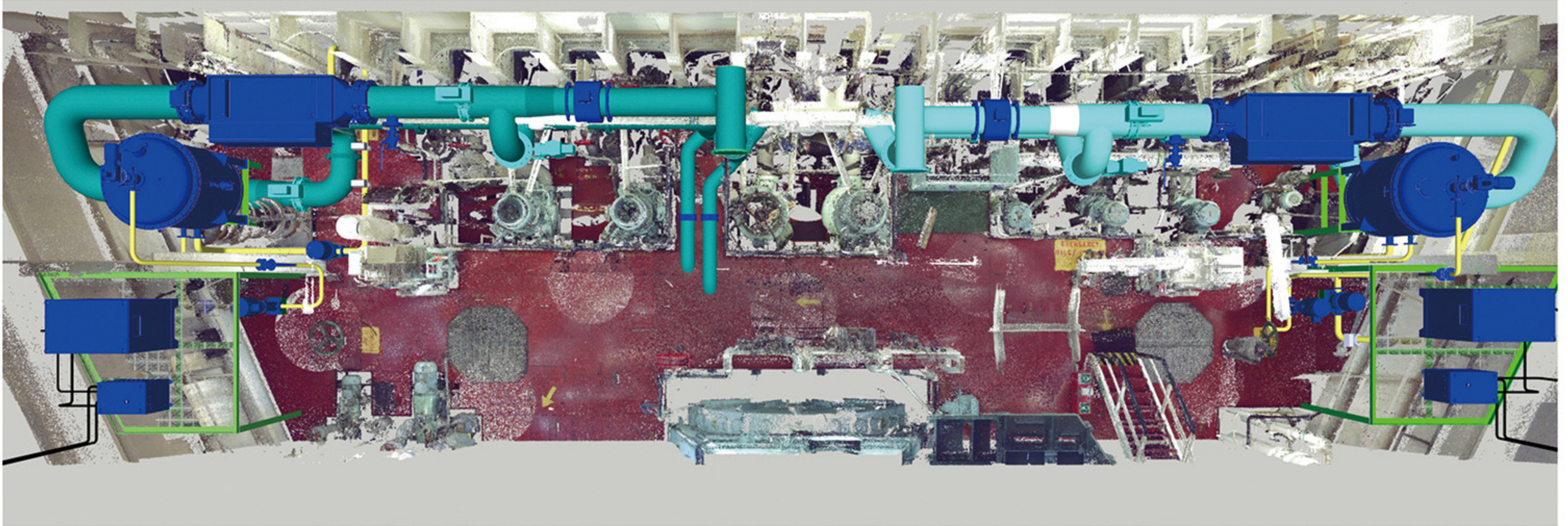
- 签订合同
Contract
- 订购产品
Equipments Order
- 图纸送审
Plan Approval
- 设备生产
Production

2/21周 Weeks

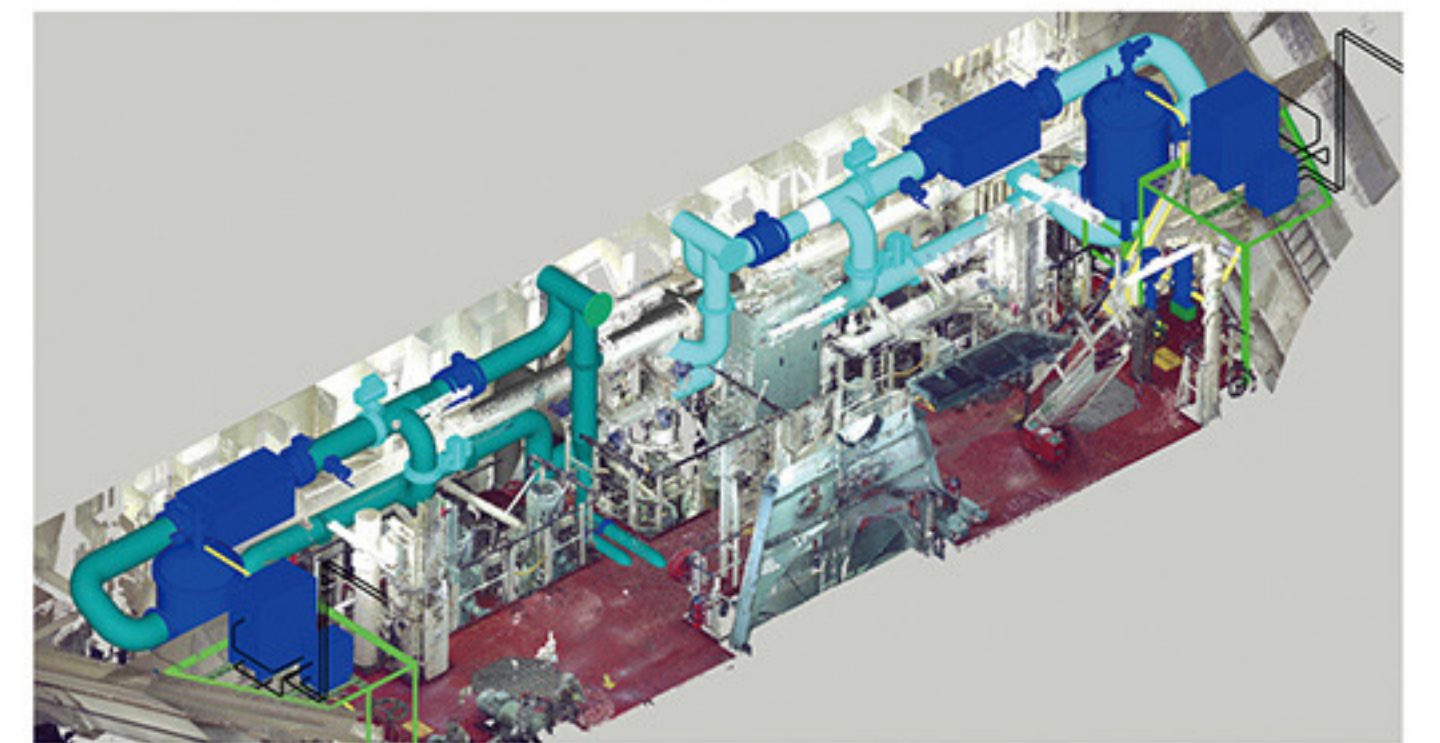
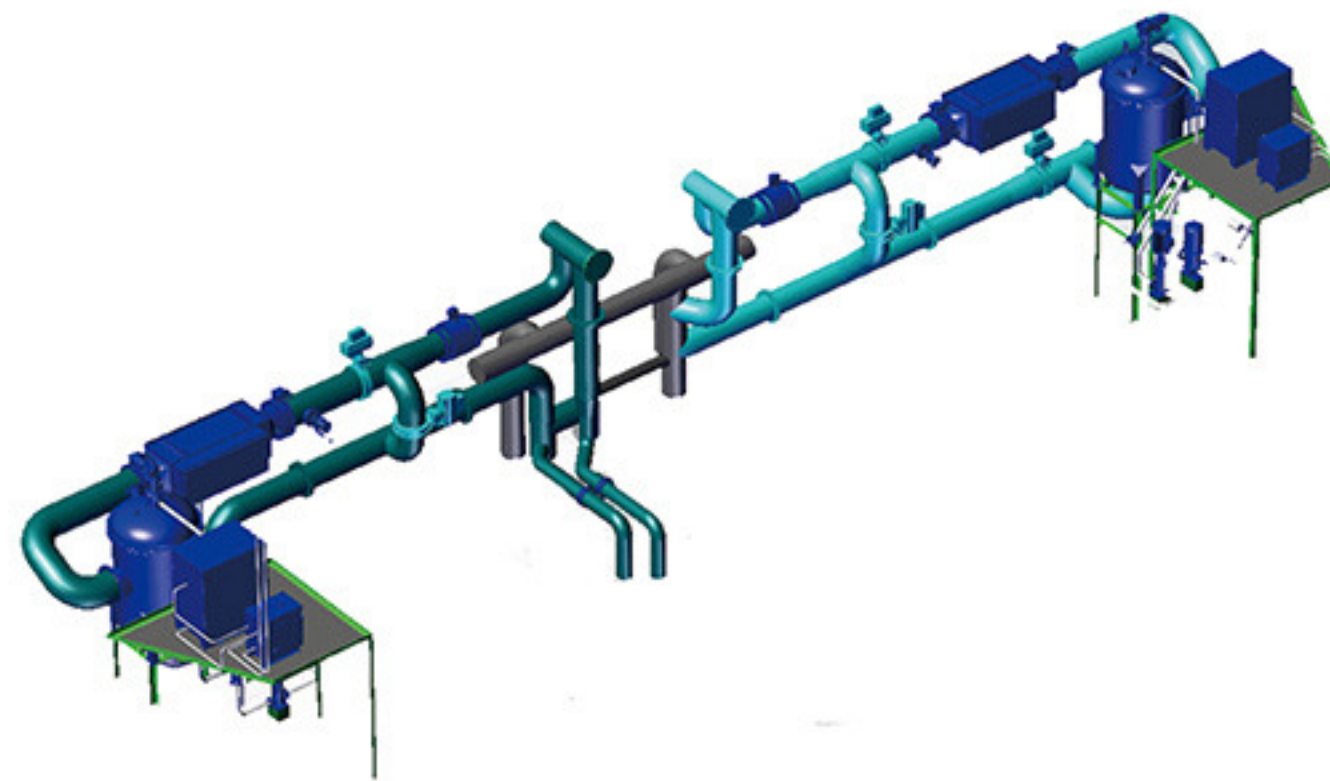
- 设备安装
Installation
- 设备调试
Commissioning
- 船级报验
Class Approval
- 使用培训
Operation Training

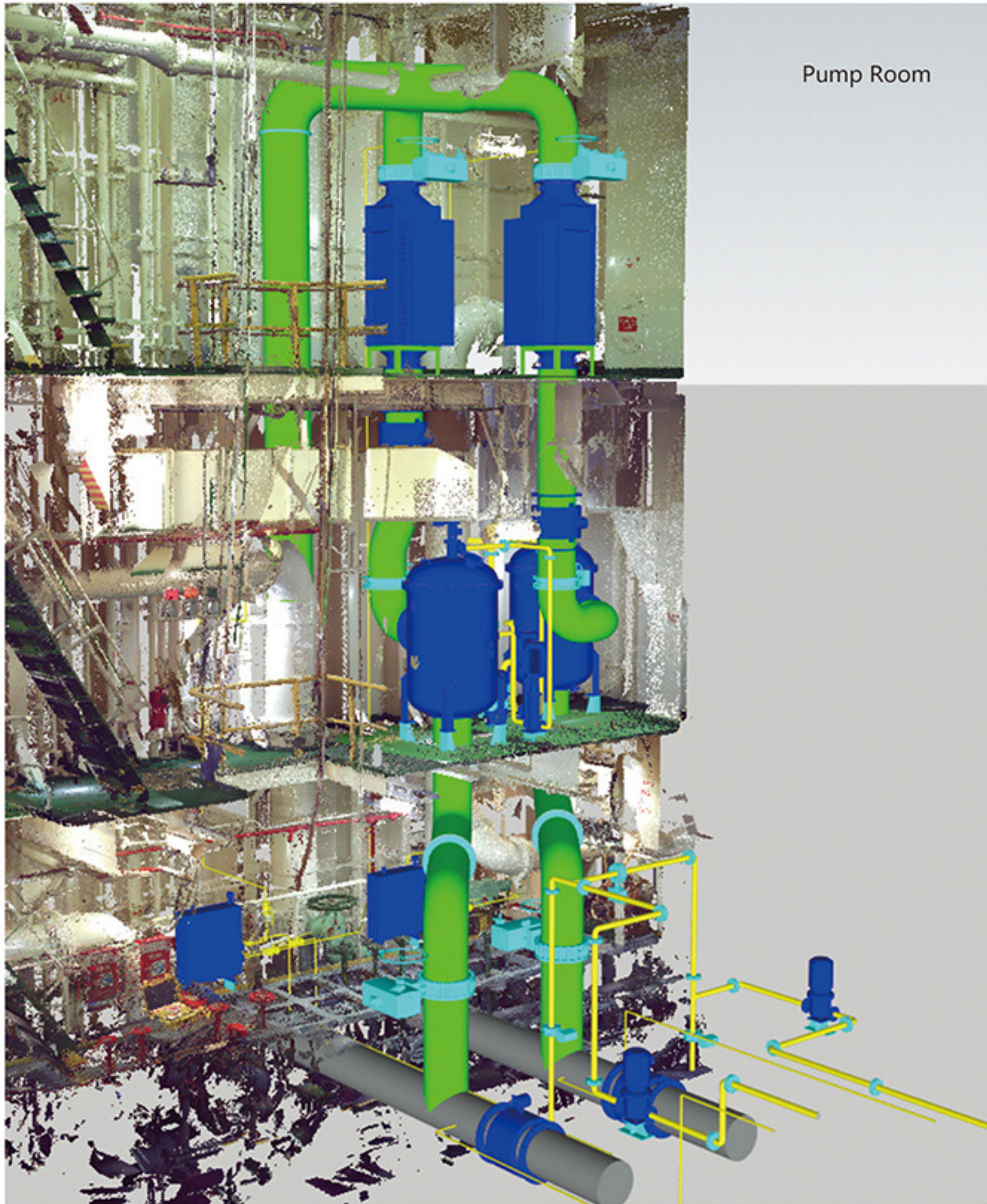


解决方案 Retrofitting Design

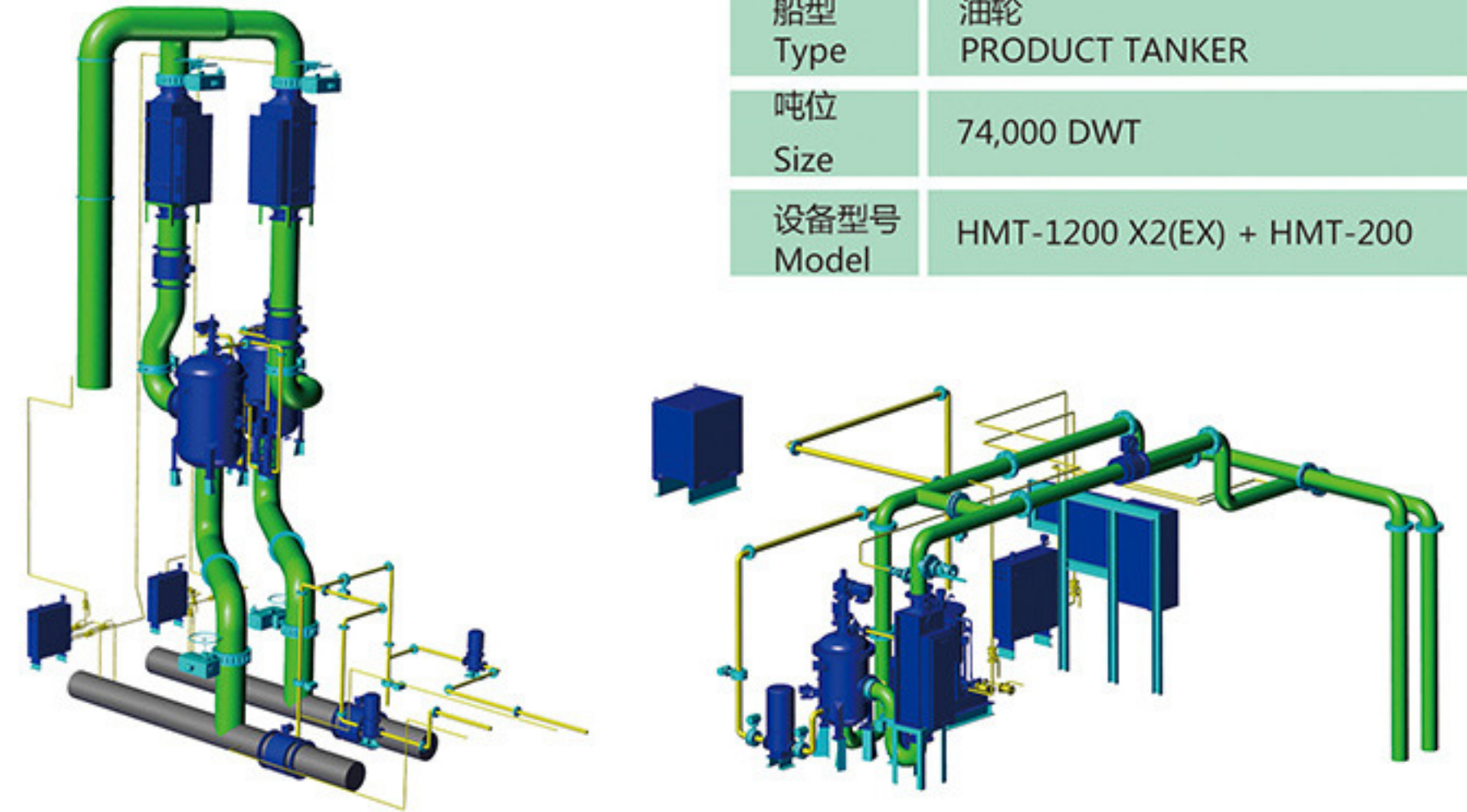


船型 Type	散货船 Bulk Carrier
吨位 Size	82,000 DWT
设备型号 Model	HMT-1200 X2

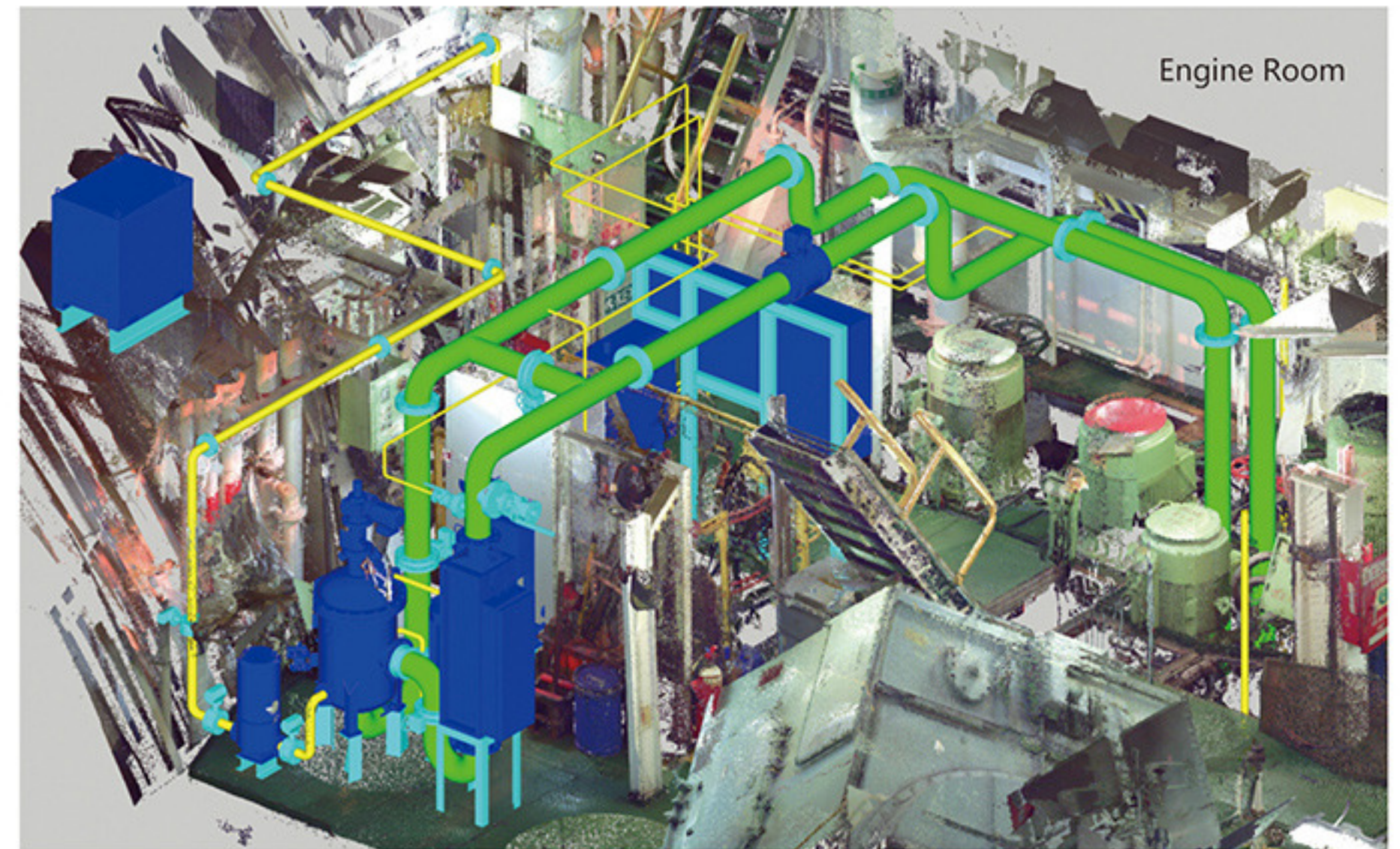




Pump Room



船型 Type	油轮 PRODUCT TANKER
吨位 Size	74,000 DWT
设备型号 Model	HMT-1200 X2(EX) + HMT-200



Engine Room

案例

Cases

新造船案例 New Building Cases

船型 Type	集装箱 Container Vessel
吨位 Size	4662 TEU
设备型号 Model	HMT - 600
安装时间 Date	2014



船型 Type	化学品成品油船 Chemical/Oil Products Tanker
吨位 Size	50,000 DWT
设备型号 Model	HMT-800x2(EX)+HMT-300
安装时间 Date	2014



改装船案例 Retrofitting Cases

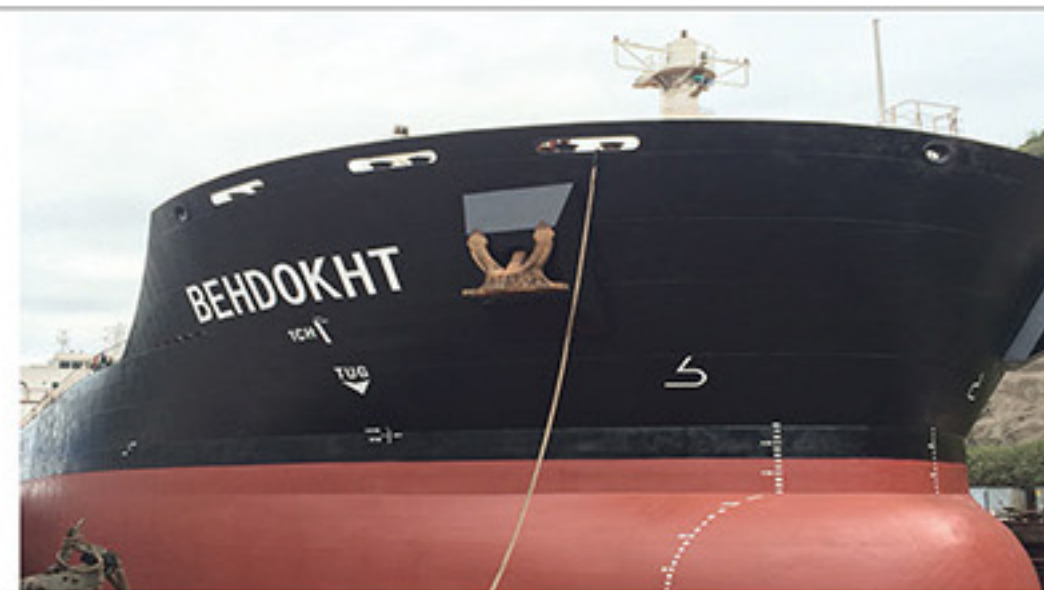
船型 Type	集装箱 Container Vessel
吨位 Size	4662TEU
设备型号 Model	HMT - 600
安装时间 Date	2016



船型 Type	化学品船 Chemical Tanker
吨位 Size	19,500 DWT
设备型号 Model	HMT-1000EX
安装时间 Date	2015



船型 Type	散货船 Bulk Carrier
吨位 Size	53,000 DWT
设备型号 Model	HMT-1000 X2
安装时间 Date	2015



船型 Type	原油油轮 Crude Oil Tanker
吨位 Size	149,000 DWT
设备型号 Model	HMT-2000 X2(EX)+HTM-300
安装时间 Date	2015



船型 Type	散货船 Bulk Carrier
吨位 Size	61,000 DWT
设备型号 Model	HMT-1000 X2
安装时间 Date	2015



船型 Type	液化石油气船 LPG Carrier
吨位 Size	8,000 M ³
设备型号 Model	HMT-200
安装时间 Date	2014



海德威在全球56个国家设立120多个销售及售后服务网点，形成完善的全球服务网络。

Headway has established more than 120 sales/after-sales service stations in 56 countries and regions around the world.



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