



BSKY™

# AMP 船舶岸电系统

Alternative Maritime Power System



- 紧凑设计 & 节约成本
- 环境保护
- 降低碳排放
- 降低船舶维护成本
- 全球服务网络

- Compact Design & Cost Saving
- Protecting the Environment
- Reduction of CO<sub>2</sub> emissions
- Ship Maintenance Cost Saving
- Global Service Network

# BSKY™ AMP 船舶岸电系统

BSKY™ AMP 船舶岸电系统是一种降低船舶靠港期间碳排放的专有技术。替代船舶靠港时原有的柴油发电方式，采用船舶与码头岸电即插即用形式，真正实现船舶靠港时的替换电源作用。



## 什么是AMP船舶岸电系统?

在船舶靠港期间，船上发电使用高浓度船用油或重油会导致含硫化合物、氮氧化物和颗粒物的排放。

为了应对环境污染，我们建议实施船舶岸电系统。

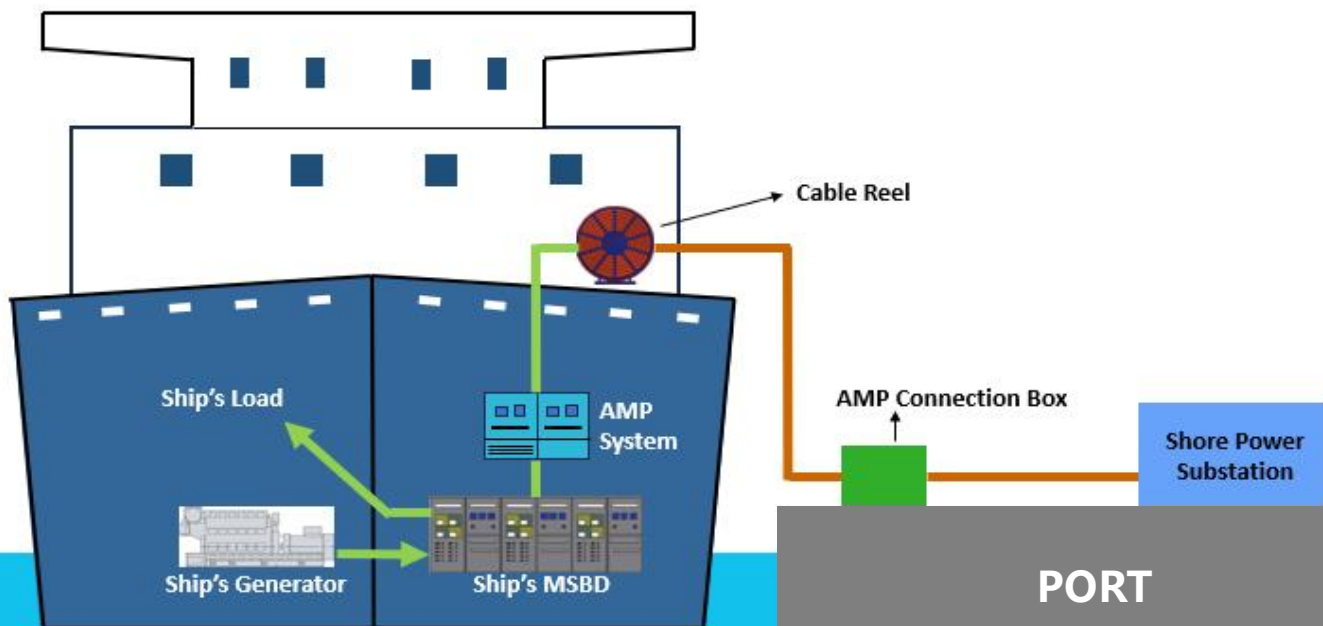
AMP岸电系统是一种替代船舶发电的解决方案，通过从岸上供电，在港口停留期间无需运行船上发电机。这大大降低了船舶燃料消耗、排放和噪音。



根据国际海事组织的规定，从2023年1月1日起，船舶必须符合EEXI和CII评级的要求。

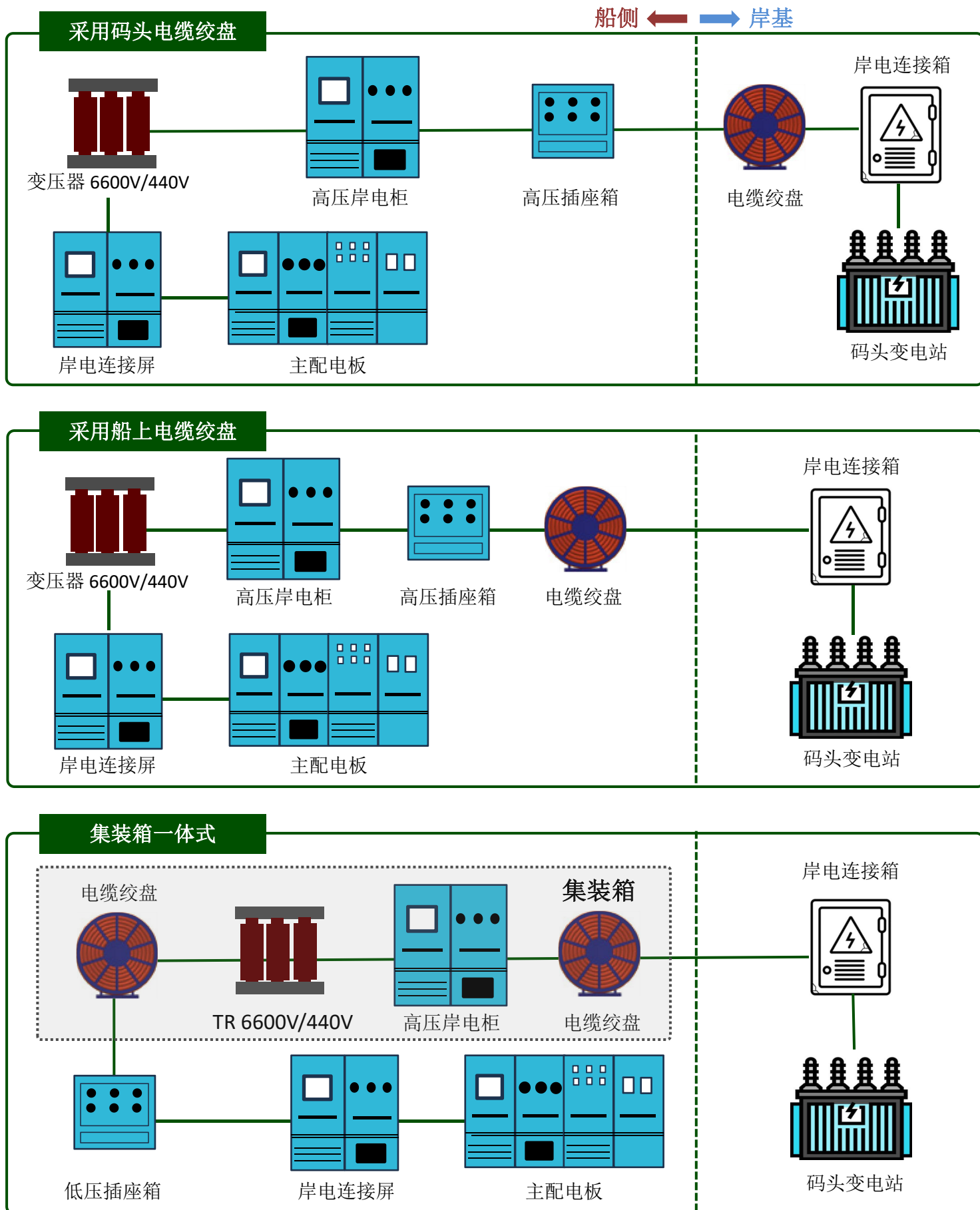
在EEXI评估期间，从码头接收电力可以减少二氧化碳排放。当船舶发动机在港口停留期间使用时，会排放废气，这会对CII评级产生不利影响。

因此，AMP船舶岸电系统的采用提供了一种不仅符合环境保护目标，而且同时满足监管要求（EEXI和CII评级）的解决方案。



船舶岸电系统架构

# BSKY™ AMP 船舶岸电系统图



# 主要设备

## 电缆绞盘

电缆绞盘用于储存和管理岸电电缆，保护和整理电缆，以确保船舶和港口之间的电气连接畅通。电缆绞盘安装在码头或船舶上。



## 高压岸电柜

高压岸电柜用于控制和分配岸电电源，并确保安全操作。



## 岸电连接屏 (内置PMS)

AMP岸电连接屏负责低压电气系统内的控制和配电，并管理和保护低压电路。



## 变压器

变压器执行电源的电压转换，将岸电电压转换为船上电气系统或设备所需的电压。

## 插座箱

插座箱用于处理码头岸电和船舶之间的电气连接。采用电缆插头形式，为船上的电气系统供电。



## PMS (功率管理系统)

PMS (功率管理系统) 内置于AMP岸电连接屏中。PMS管理岸电系统的整体运行和配电。它可确保高效的电力利用，并调节船舶的电力需求。

# 一站式交钥匙方案 – BSKY™ AMP 船舶岸电系统

### 工程前期

- 船型检查
- 图纸检查
- 改造方案

### 工程开始

- 上船勘察
- 3D 扫描
- 改造设计
  - 结构
  - 电气

### 设备供货

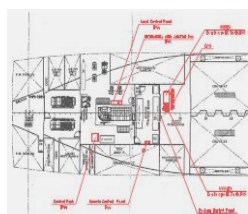
- 电缆绞盘
- 插座箱
- 高压岸电柜
- 岸电连接屏
- PMS
- 变压器
- 辅材

### 安装 & 改造施工

- 设备安装
- 电缆敷设
- 主配电板改造
- 岸电连接
- 结构施工

### 调试 & 交验

- 系统调试
- 监督管理
- 操作试验
- 船员培训



# BSKY™ AMP(Alternative Maritime Power) System

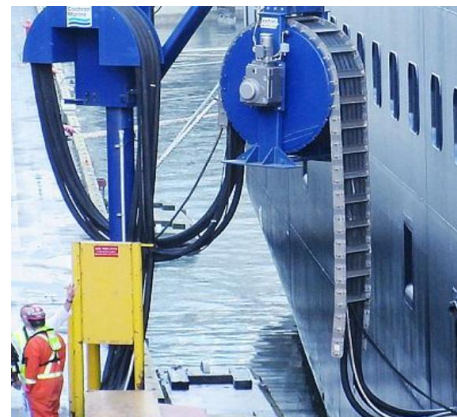
BSKY™ AMP system is a unique technology that reduce emissions from vessels docked at the port. Instead of running on diesel power while at berth, AMP-equipped ships “plug in” to shore side electrical power – literally an alternative power source for oceangoing vessels.

## What is AMP System?

During vessel berthing, the utilization of Bunker C fuel or heavy oil for onboard power generation results in emissions of sulfur compounds, nitrogen oxides, and particulate matter.

To combat environmental pollution, we recommend the implementation of an Alternative Maritime Power (AMP) system.

The AMP system, an Alternative Maritime Power solution, eliminates the need for onboard engines during port stays by supplying electricity from the shore. This substantially reduces vessel fuel consumption, emissions, and noise.

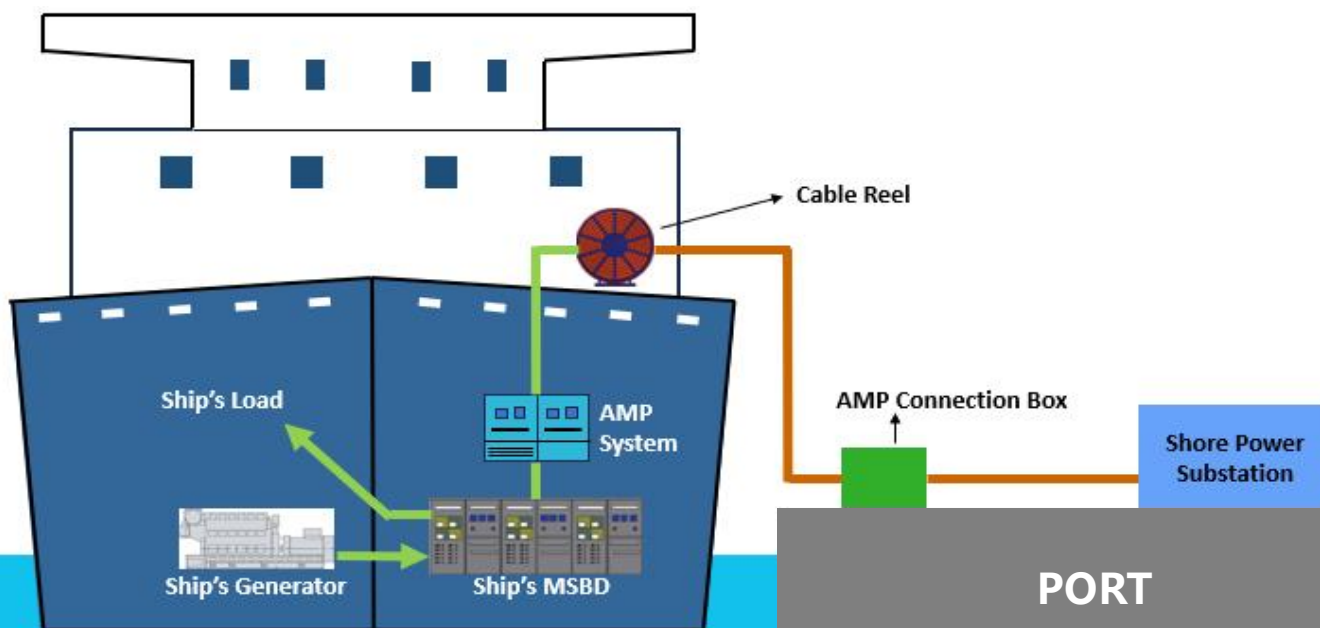


According to IMO regulations, vessels starting from January 1, 2023, must meet the requirements of EEXI and CII ratings.

Receiving power from the shore at ports can lead to a reduction in CO<sub>2</sub> emissions during EEXI assessments.

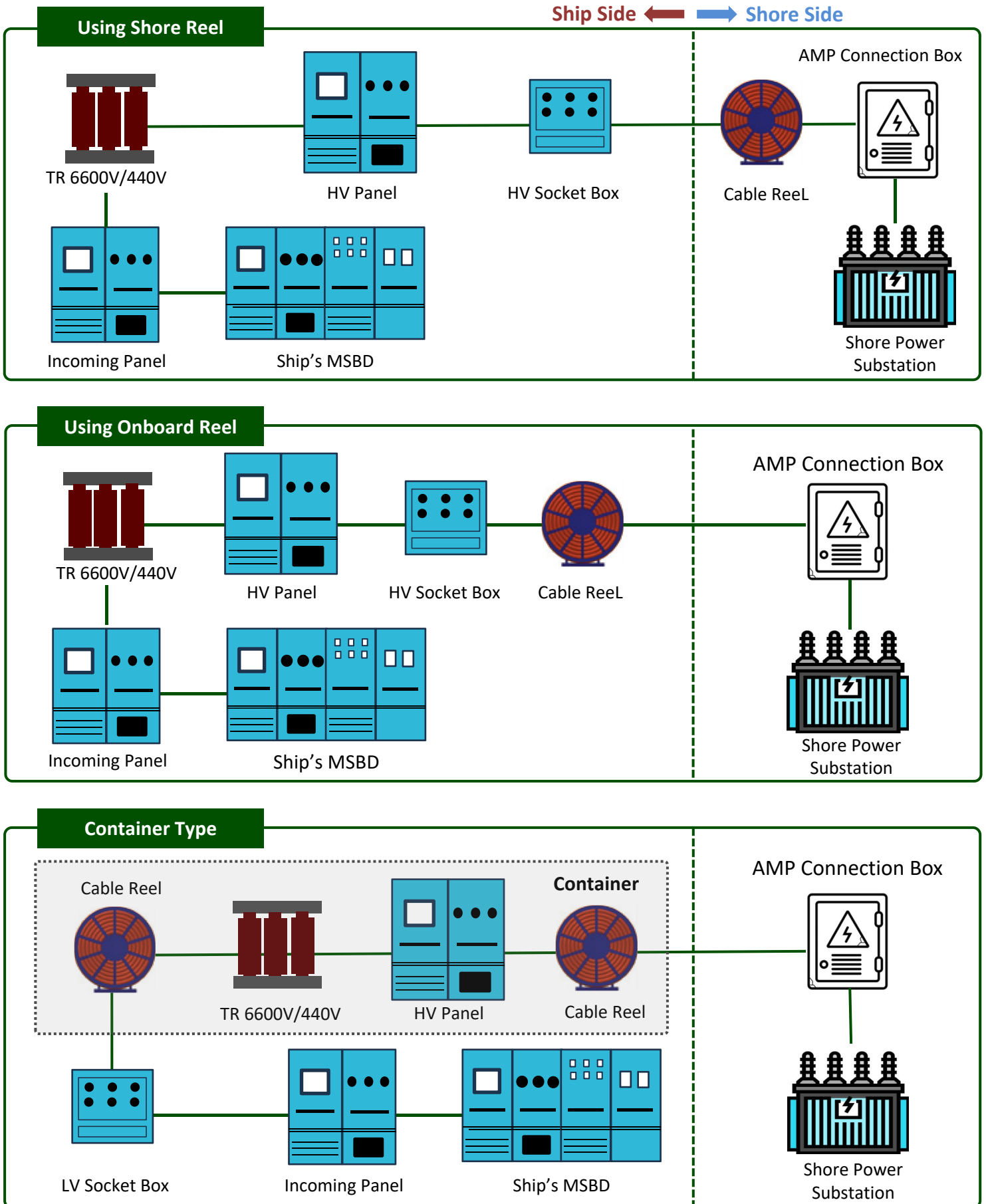
when ship's engines are in use during port stays, the emission gases are emitted, and this cause adversely affecting the CII rating.

Hence, the adoption of the AMP system offers a solution that not only aligns with environmental protection goals but also fulfills regulatory requirements (EEXI and CII ratings) simultaneously.



Concept of AMP(Alternative Marine Power) System

# BSKY™ AMP System Diagram



# Key Devices

## Cable Reel

The cable reel stores and manages the power cables, protecting and organizing them to ensure a smooth electrical connection between the vessel and the port. It is installed on the dock or vessel.



## HV Panel (High Voltage Panel)

HV Panel Serves control and distribution of the high-voltage electrical supplied from shore power. HV Panel manages high-voltage electrical circuits and ensures safe operations.



## Incoming Panel (PMS built in)

AMP incoming panel is responsible for control and distribution within the low-voltage electrical system. AMP incoming Panel manages and safeguards low-voltage electrical circuits.



## Transformer

The transformer performs voltage conversion of electrical energy, transforming the voltage provided by the power supply unit into the voltage required by the vessel's onboard electrical system or devices.



## PMS (Power Management System)

PMS(Power Management System) is built into AMP Incoming Panel. PMS manages the overall operation and power distribution of the AMP system. It ensures efficient power utilization and regulates the vessel's power demands.

## Socket Box

Socket box handles the electrical connection between the power supply unit and the vessel. It accepts the plug of the power cable, supplying power to the vessel's onboard electrical system.



# Turnkey Solution – BSKY™ AMP System

## Pre-Engineering

- Ship type check
- Drawing Review
- Retrofit concept

## Engineering

- Onboard Survey
- 3D scanning
- Retrofit design
  - Mechanical
  - Electrical

## Equipment Supply

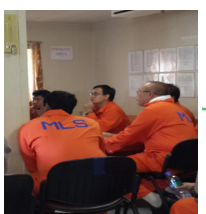
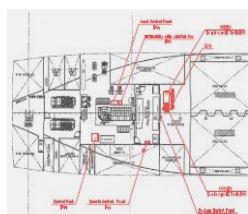
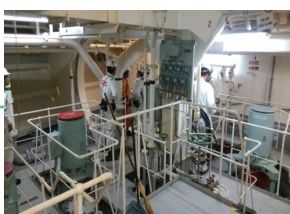
- Cable Reel
- Socket Box
- HV Panel
- Incoming Panel
- PMS
- Transformer
- Accessories

## Installation & Modification

- Equipment
- Cable laying
- Ship's MSBD Modification
- Shore Power Connecting
- Wall/Ceiling work

## Commissioning & Test

- Commissioning
- Supervision
- Operating Test
- Crew Training



# 关于蓝天 | ABOUT US

续存 28年  
Since 1995

无锡蓝天电子股份有限公司创建于1995年，是一家专业从事陆地建筑消防及船舶配套消防产品、船舶岸电接收装置、国际船舶压载水管理系统等产品集研发、生产、技术服务于一体的国家级高新技术企业，国家工信部专、精、特、新“小巨人”企业。

公司占地25000平方米，建筑面积62700平方米，具有强大的技术研发和持续创新能力，现有员工300多人，分别拥有博士、硕士研究生28人，本科生50多人分布在科研、生产、质量、市场等各部门。公司获有国内外发明、实用新型专利百余项，是江苏省首批知识产权管理体系建设示范企业，设有江苏省船级电子工程技术中心，江苏省教育厅授权的研究生工作站。

公司使命：以高科技系统技术保护人民生命和财产安全，为快速成长并具有远大前程的建筑和船舶行业提供安全和环保类高品质的产品及服务。我们会以自己的技术专长在这一领域“永继经营”。

Wuxi Brightsky Electronic Co., Ltd. was founded in 1995. It is a High-tech enterprise specializing in the R&D, manufacture and technical services of building fire fighting, marine fire fighting, AMP shore power receiving system, ballast water management system and other products. The company covers an area of 25,000m<sup>2</sup> and a building area of 62,700m<sup>2</sup>. It has strong technology research and development and continuous innovation capabilities. It has more than 300 employees, and over 20 doctoral and master's degree holders are distributed on the front lines of scientific research and production management. It has Marine Electronic Engineering Technology Center of Jiangsu Province and Graduate student workstations licensed by Education Department of Jiangsu Province. Creating values for customers, creating opportunities for employees and creating benefits for society and shareholders are the core values of the Brightsky.

The leading products of the company have obtained the type approval certificates those were issued by various classification societies around the world such as CCS, LR, DNV, BV, ABS, KR, NK, and RS according to industry requirements. The sales and service network covers the entire countries and major ports in the world.

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