



## Alternative Marine Power (AMP) / Shore Power Solutions

Clean Energy • Emission Reduction • Class-Compliant Shore Connection Systems

ALQAQNOOS Engineering provides complete **Alternative Marine Power (AMP)** solutions—also known as **Shore Power or Cold Ironing Systems**—allowing vessels to safely shut down onboard generators and use clean shore-based electrical power while at berth.

Our AMP systems are delivered with full **engineering, installation, integration, testing, and class approval support**, in cooperation with our certified technology partner.



### 1. What is Alternative Marine Power (AMP)?

AMP enables vessels to connect directly to **shore electrical power** while alongside the quay, supplying all onboard loads without running auxiliary engines.

This results in:

- Zero emissions at berth
- Reduced fuel consumption
- Lower noise and vibration
- Compliance with global environmental regulations (IMO, port authorities)

### 2. Our AMP System Capabilities

#### High Voltage & Low Voltage Shore Power Systems

We provide complete solutions for:

- **High Voltage Shore Power (HVSC):** 6.6 kV / up to 7.5 MVA
- **Low Voltage Shore Power (LVSC):** For smaller vessels and port service craft
- 50 Hz and 60 Hz systems supported
- IEC / ISO / IEEE 80005-1 compliant shore power interface



### 3. AMP Containerized System

We supply fully integrated **AMP container solutions** for port and vessel-side connection.

#### Key Built-In Components

- High-voltage shore connection switchboard
- AMP automatic cable reel system
- Control & monitoring panel
- Fire detection & fire extinguishing system
- Heating, lighting & dehumidification



- Optional step-down transformer for LV output
- 40'HC container or customized dimensions

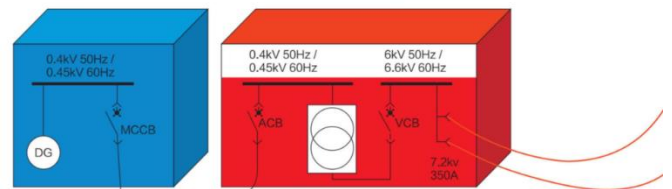
## 4. AMP Cable Reel System

Automatic shore power cable handling system with:

- Power capacity up to **7.5 MVA at 6.6 kV**
- Slip ring up to **700 A**
- Magnetic coupling (non-contact, lubrication-free)
- Automatic tension control
- Weatherproof housing for harsh marine environments

## 5. High Voltage Shore Connection Switchboard

- Rated voltage up to **12 kV**
- Main busbar current **1250 A**
- Fully metal-segregated design
- Arc fault safety structure
- Type tested and Class approved (ABS, DNV, CCS, BV, LR, RINA)



## 6. Complete Turnkey AMP Services by ALQAQNOOS

### Engineering

- Load analysis & single line diagrams
- Short-circuit & discrimination studies
- Cable routing & deck strength calculations
- Class technical documentation

### Supply Scope

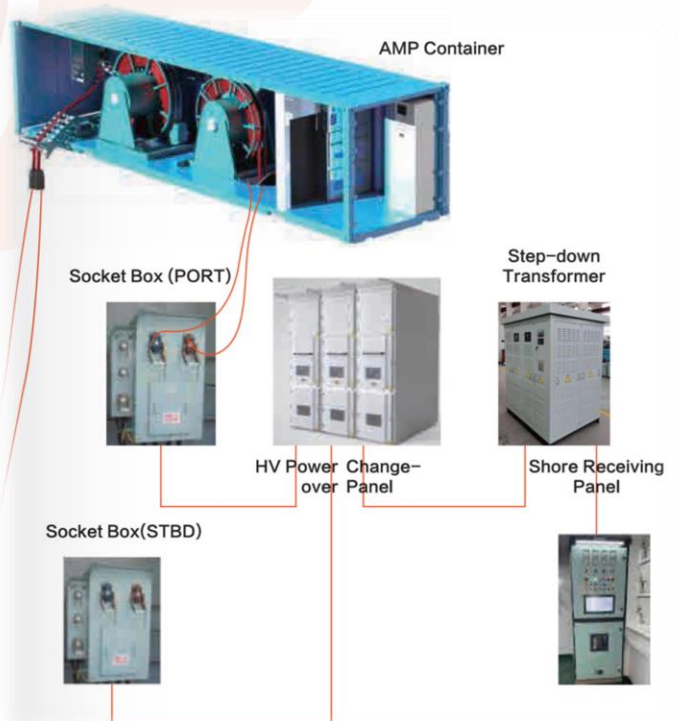
- AMP container
- HV/LV switchboards
- Cable reels
- Shore socket boxes
- Step-down transformers
- Monitoring & control panels
- UPS systems

### Installation

- Dry docking or afloat installation
- Hot works & deck penetrations
- Cable laying & tray installation
- MSB retrofit interfacing

### Testing & Commissioning

- High-voltage cable dielectric testing
- Functional testing
- Cold wire commissioning
- Harbor acceptance test (HAT)





- Class approval coordination

## 7. AMP Test Facility Support

We provide access to **shore power test facilities** for full pre-departure testing and class approval:

- 6 kV (50 Hz) and 6.6 kV (60 Hz) testing
- Power capacity up to **500 kW**
- IEC standard shore sockets

## 8. Benefits for Shipowners & Operators

- Full **environmental compliance**
- Reduced fuel & maintenance costs
- Lower carbon footprint
- Noise-free port operation
- Extended generator lifetime
- Improved port acceptance & ESG rating

## 9. Vessel Types Supported

- Container vessels
- Bulk carriers
- Tankers
- Ro-Ro & PCTC
- Offshore vessels
- Passenger ships
- Floating docks & port facilities

## 10. Our Service Positioning

ALQAQNOOS acts as your **system integrator and technical service partner**, while the **AMP equipment and technology** are supplied and supported by certified global manufacturers.

We ensure:

- Correct system selection
- Professional marine electrical integration
- Class-compliant approval
- Long-term operational support

## Your Trusted Partner for Shore Power & Clean Port Operation

ALQAQNOOS enables your fleet to transition to **eco-friendly port operation** with reliable, safe, and fully approved **Alternative Marine Power (AMP) solutions**.

