

Installation Services EGCS/BWTS Retrofit on Ships

Turn-Key

- Engineering
- Procurement
- Prefabrication
- Project Management
- Riding Teams
- Installation
- Commissioning
- Class Approval

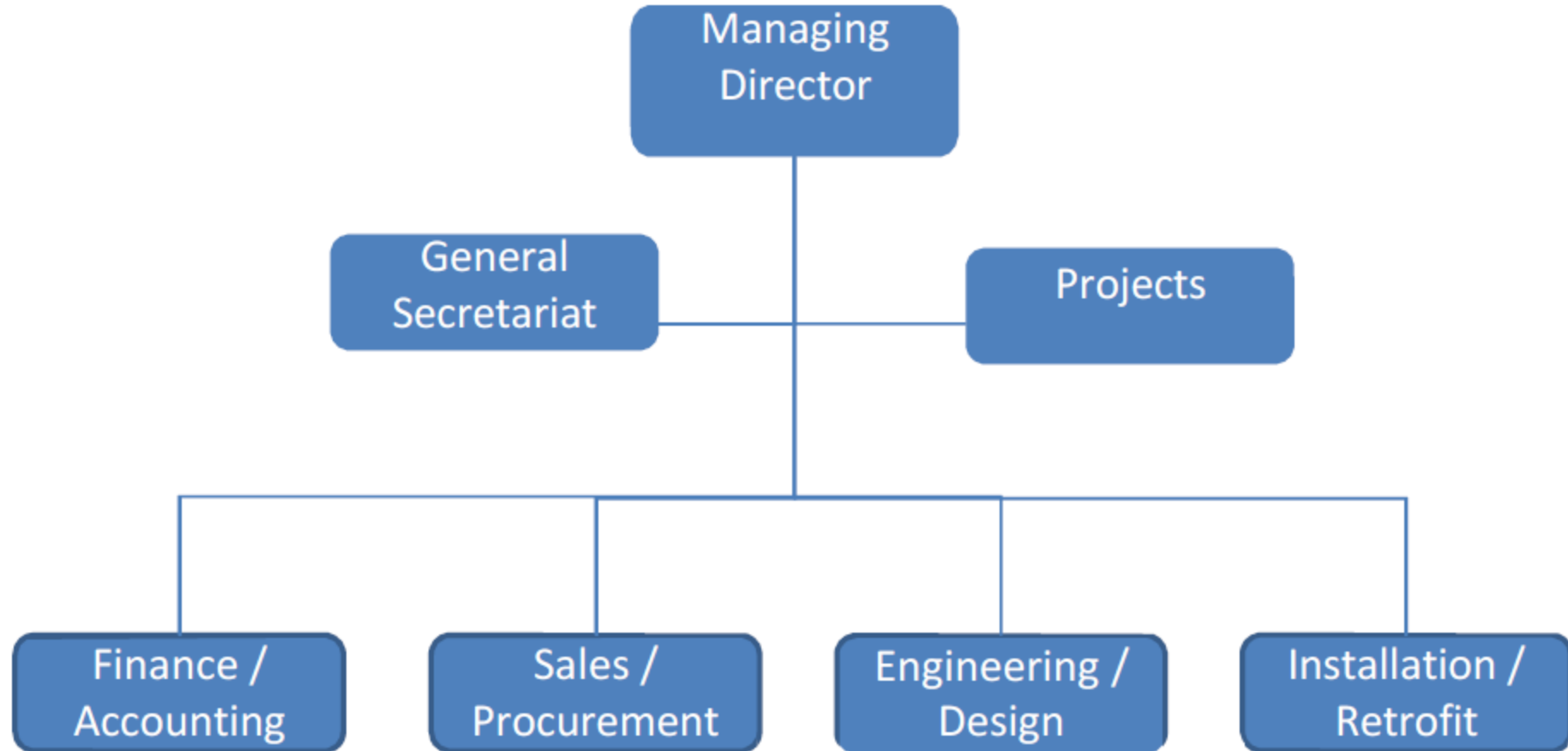


YOUR LINK TO SERVICES WORLDWIDE

About

- SHIPTECH Engineering and Associated SHIPLINK S.A., originally established in 1993, at Piraeus, Greece, are activated in Turn-Key Projects entailing Consulting, Engineering, Procurement - Ship Repair Management and Contracting, both in Greece and abroad.
- Head offices are in Piraeus port (maritime center), key position for our business with Shipping companies, Suppliers, Maritime experts.
- Our long record of Projects has been extended in the recent years to retrofits Services in Greece and abroad for:
 - Exhaust Gas Cleaning Systems (EGCS).
 - Ballast Water Treatment Systems (BWTS) on ships

Organization Chart



Services

Project Management & Contracting

- Project management
- Procurement consultancy
- Building supervision
- Feasibility Analysis

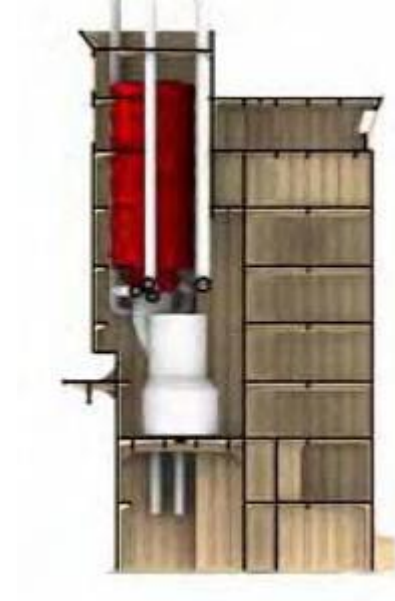
Engineering / Documentation services

- Retrofit / Conversion
- Machinery installations
- Inclining Tests & Draft survey
- Stability, Tonnage, calculations
- Operational booklets manuals, drawings
- Damage and Fire control plan
- Ballast water management plan
- Cargo securing manual



EGCS Projects

- Type of vessels:
Containership / Tanker / Bulk Carrier / Passenger
- Makers:
STI / VDL / ALFA-LAVAL / CROE / EcoSpray



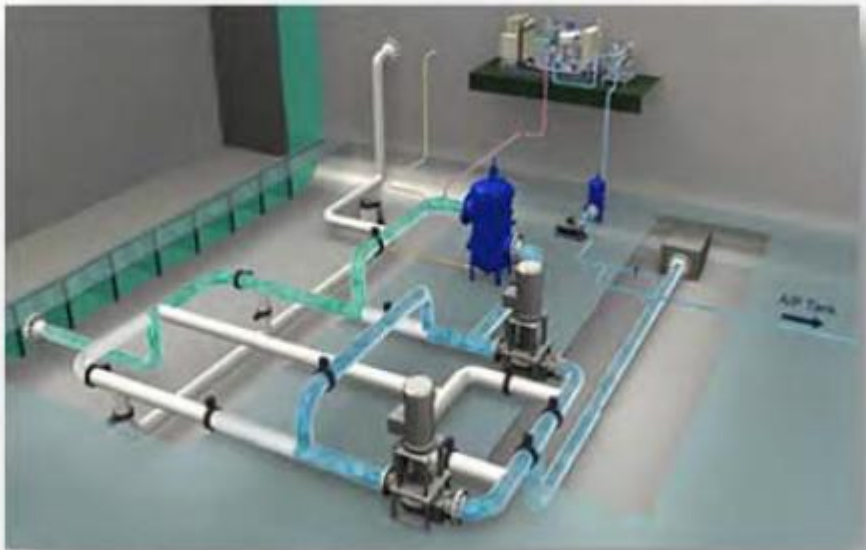
Vessel Type	Vessel Size DWT/TEU	EGCS Maker
Containership	6500	STI
Containership	8000	STI
Containership	8000	STI
Crude Oil Carrier	318000	VDL
Crude Oil Carrier	158000	VDL
Bulk Carrier	61500	EcoSpray
Crude Oil Carrier	316700	Alfa Laval
Crude Oil Carrier	176200	Alfa Laval
Bulk Carrier	178800	Alfa Laval
Bulk Carrier	176000	Alfa Laval
Bulk Carrier	81500	EcoSpray
Bulk Carrier	92500	EcoSpray
Bulk Carrier	82000	EcoSpray
Bulk Carrier	82000	EcoSpray
Bulk Carrier	92500	EcoSpray
Passenger RoRo	7500	CROE
Passenger RoRo	7500	CROE

- Type of vessels:

Containership / Tanker / Bulk Carrier/Car Carriers

- Makers:

ALFA-LAVAL / TECHCROSS/ PANASIA/ HEADWAY/
BIO-UV/BAWAT/ERMA FIRST



No. of Ships	Vessel Type	Vessel Size	BWTS Maker
4	Bulk Carrier	76000	Headway
4	Containership	1700 TEU	ALFALAVAL
3	Bulk Carrier	38800	TEHCROSS
3	Containership	1700 TEU	Pending
2	Bulk Carrier	38800	TEHCROSS
11	Bulk Carrier	80500	Headway
6	Bulk Carrier	76000	ALFALAVAL
2	Tanker	80000	Headway
3	Bulk Carrier	76000	PANASIA
5	Bulk Carrier	57000	Pending
3	Bulk Carrier	57000	Headway
4	Bulk Carrier	93000	TEHCROSS
2	Bulk Carrier	35000	Headway
3	Tanker	48000	TEHCROSS
5	Bulk Carrier	81000	Pending
3	Tanker	20000	ALFALAVAL
5	Bulk Carrier	57000	Headway
1	Tanker	16000	ALFALAVAL

Scrubber Projects

- Onboard Survey and 3D Scanning
- Feasibility and Preliminary Engineering
- Installation Engineering and Design
- Plan Approval
- Final Specification and Drawings
- Supervision of Installation work on site



Onboard Survey & 3D Scanning

- Visit ship and survey spaces for positioning of system
- Identify key concerns
- 3D laser scanning





Feasibility & Preliminary Engineering

- Feasibility analysis for the installation of the selected EGCS/ WTS system on the client vessel
- Based on the onboard survey and 3D scanning the draft installation scenario is developed for approval by the ship owners

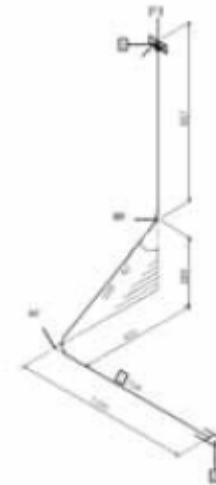
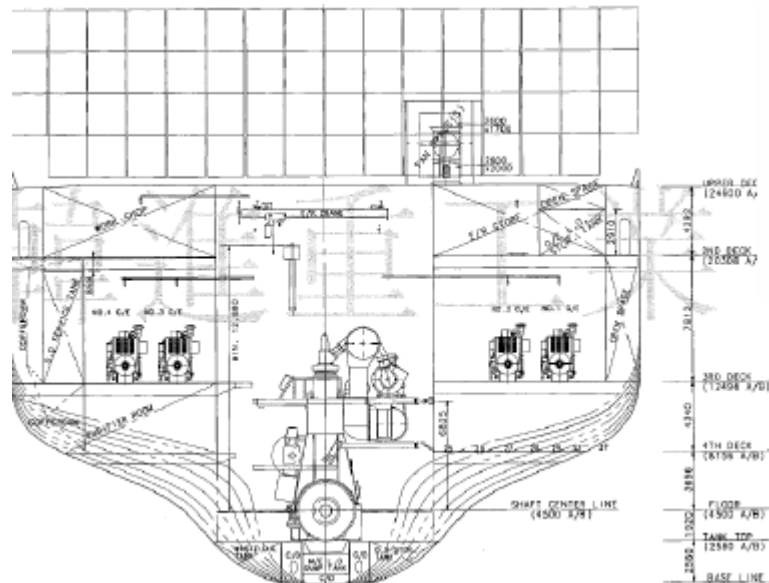
Pre-Installation Feasibility

- Determine preliminary location for the main scrubber components
- Optimize routing and usage of materials
- Secure available maintenance space
- Ensure no interference with the vessel's operation
- Determine the minimum structural modifications
- Develop alternative cost-effective solutions
- Implement EGCS/ WTS Makers installation instructions



Installation Engineering and Design

- 3D modeling of engine room
- Integrate system with ships drawings
- Positioning of the selected equipment
- Foundation of scrubber/pumps and equipment
- Pipe and cable routing
- Back pressure check
- Pressure loss calculations



Final Specification and Drawings

Final drawings and technical specification for:

- Piping
- Electrical
- Hull/steel
- Outfitting



Installation Services

Our Strengths:

- Attending with qualified senior engineers on installation work.
- Managing & resolving any additional details in cooperation with the Class & Makers.
- Dedicated- Expert Riding Teams for On Voyage Installations
- Worldwide coverage for Installations abroad, with various Yards and subcontractors



Services Include

- Repairs at Berth/Afloat/Anchorage (depending on location)
- Steel works and Piping
- Blasting, Painting and Coating works
- Mechanical works and overhauls for ME/DGs/Turbochargers
- Manufacturing, Supply, Service and Installation of deck cranes, ship cranes, cargo cranes, service cranes, life raft cranes, ship machinery, deck equipment, deck machinery, hatch covers, propulsion systems, maneuvering systems, ladders, rescue boats, hydraulic equipment.
- Electrical, Automation, Control
- Inspection & Service for Lifeboats /LSA / FFE
- Design, supply and retrofit of Ballast water treatment systems
- Provision of Steel, Pipe, Mechanical & Boiler fitters for voyage repairs.

YOUR LINK TO SERVICES WORLDWIDE

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