



PRODUCTS AND SOLUTIONS
BULK CARRIER & CONTAINER VESSELS

SENSORS & AUTOMATION SYSTEMS



**DEVELOPMENT, DESIGN
& PRODUCTION OF
ADVANCED TANK
SENSORS AND
AUTOMATION SYSTEMS
FOR MARINE
APPLICATIONS**

Bulk Carriers

SCOPE OF SUPPLY FOR BULK CARRIERS

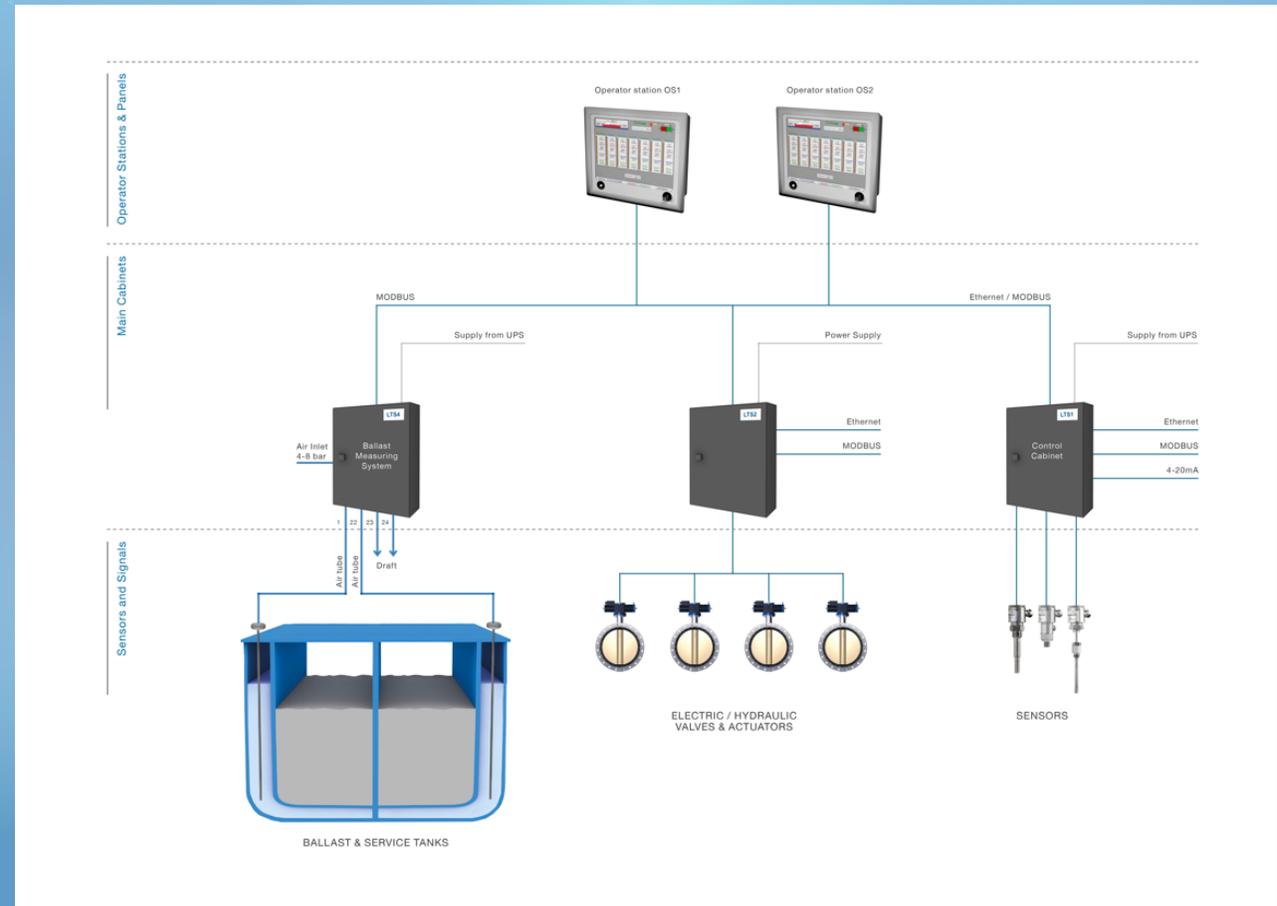
- Tank Level Gauging System for Cargo Tanks and Service Tanks
- Valve and Remote Control System
- Online Loading and Stability Computer System

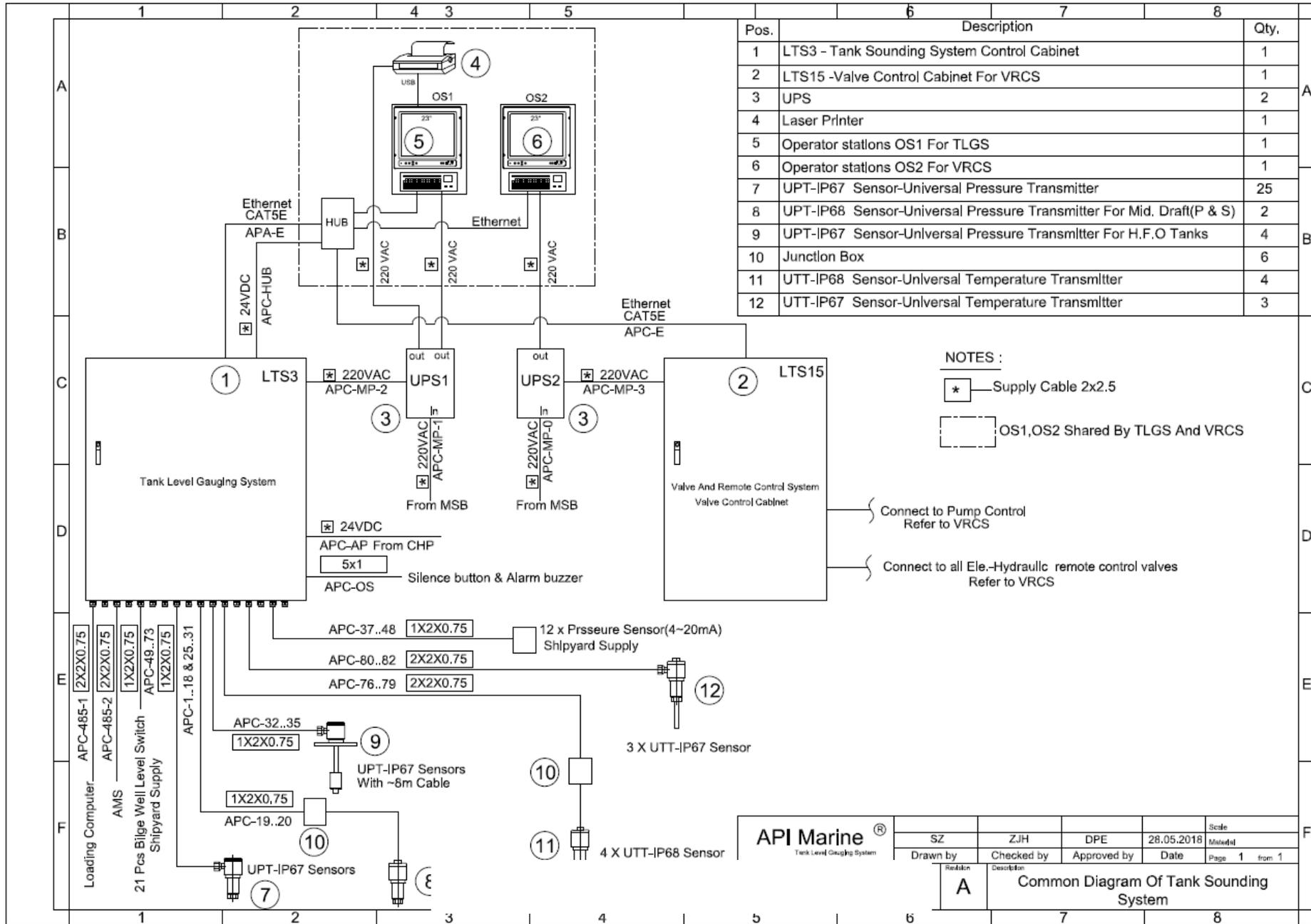


Bulk Carrier

Typical Scope of supply

- TLGS Ballast & Service Tanks
- Valve Remote Control System
- Loading Computer
- Sensors

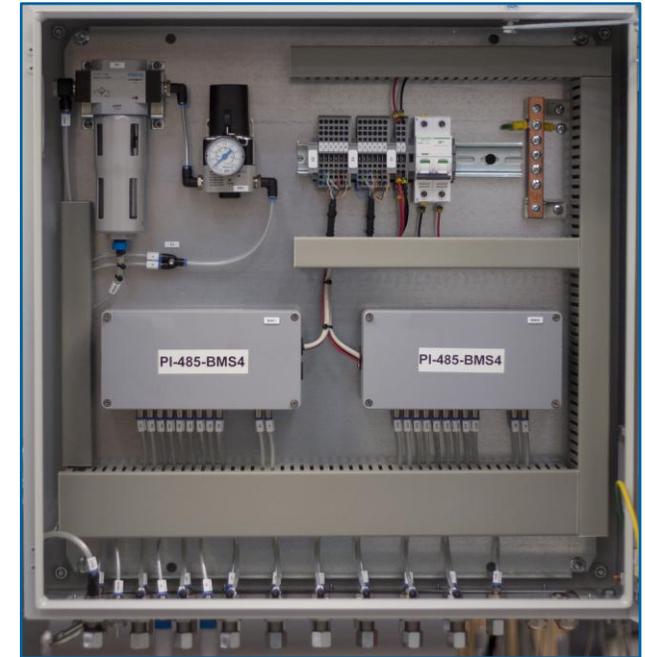
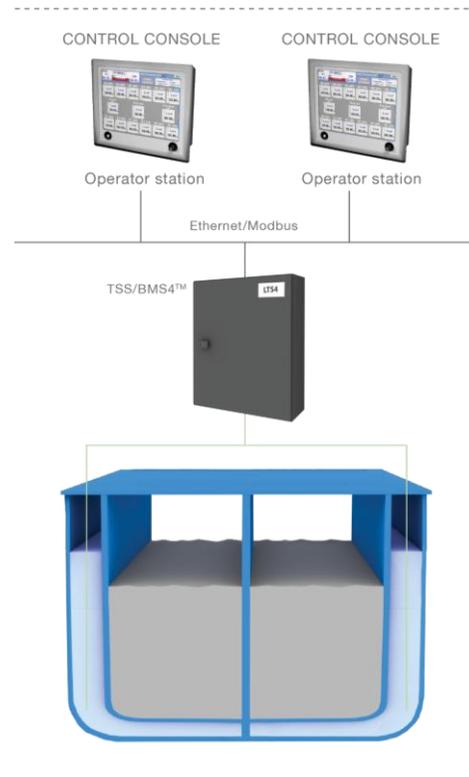




(Electric Pneumatic)

FEATURES AND FUNCTIONS

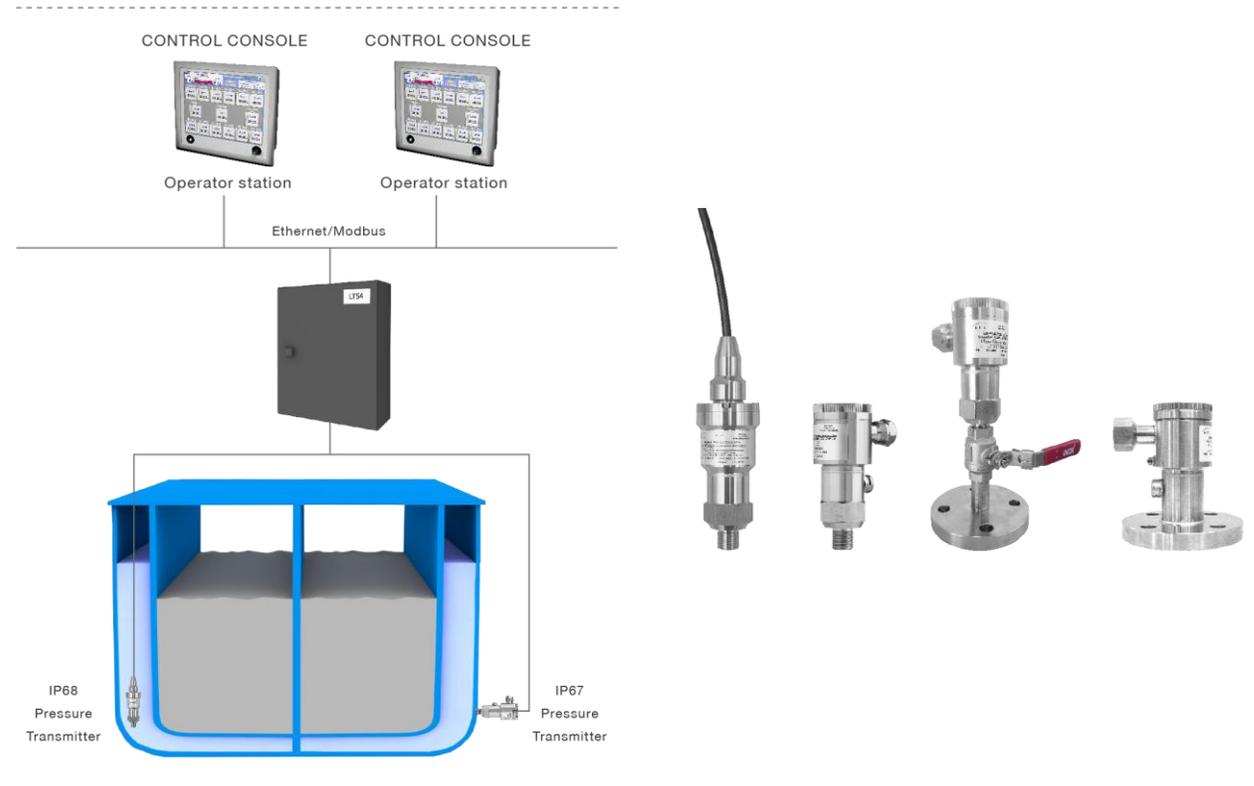
- Electro pneumatic level and draft measurement
- System suitable for all types of vessels
- Compact pricing / low investment cost
- Flexible and modular concept and design



(Pressure Transmitter)

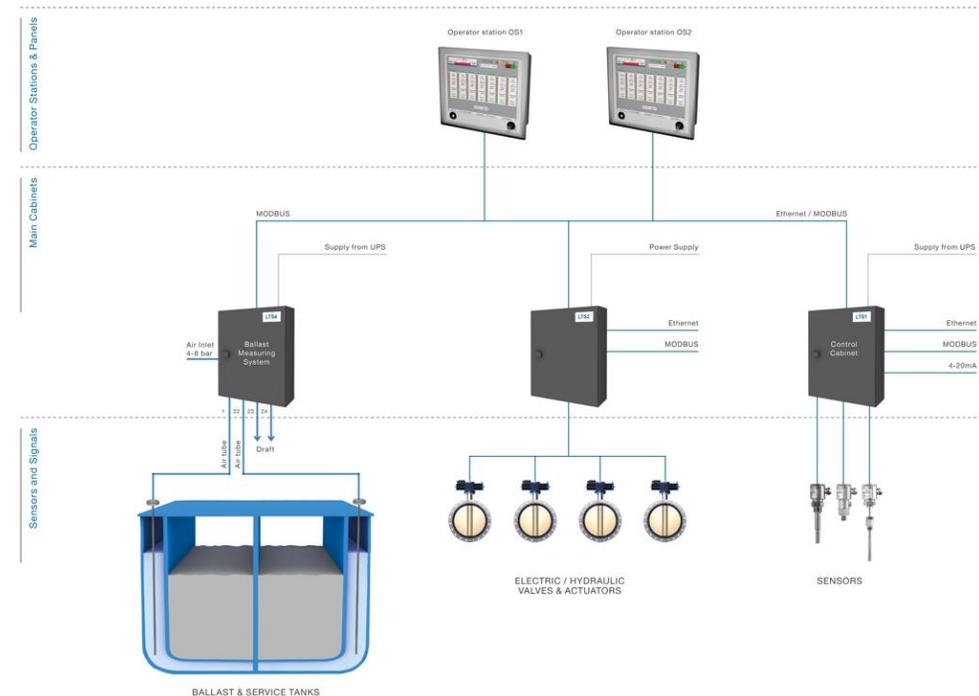
FEATURES AND FUNCTIONS

- Level measurement
- Draft measurement
- Can be supplied as stand-alone system
- Easily integrated and extended
- Level alarm functionalities
- Suitable for retrofit installations
- Sensors available in a wide variety of versions



FEATURES AND FUNCTIONS

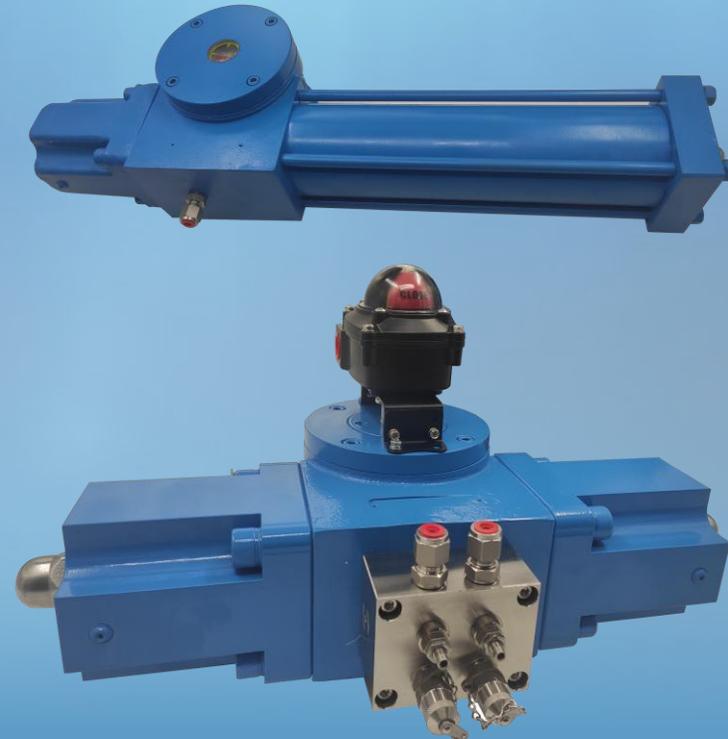
- Compact and flexible solutions
- Fully compatible with API Marine and other tank level gauging systems
- Modern hardware and software (mimic) for easy and flexible control
- Advantage to combine maker for TLGS/VRC - Less problems!
- Own development, design & approvals



Actuators

FEATURES AND FUNCTIONS

- API Marine own development - Unique and simple design
- Single and double acting
- Compact and low weight
- Easy mounting to all quarter turn valves
- Horizontal and vertical mounting
- Meets major Class requirements
- Dry or submerged mounting
- Low maintenance



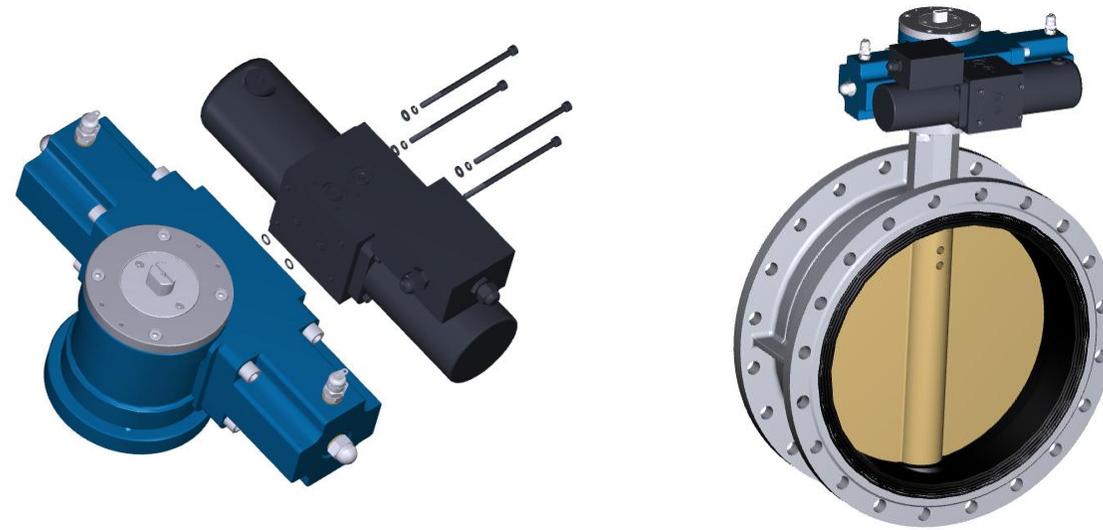
UPU

FEATURES AND FUNCTIONS

- API Marine own development - Unique and simple design
- For Single and double acting actuators
- Compact and low weight
- Easy mounting to all quarter turn valves
- Meets major Class requirements
- Low maintenance



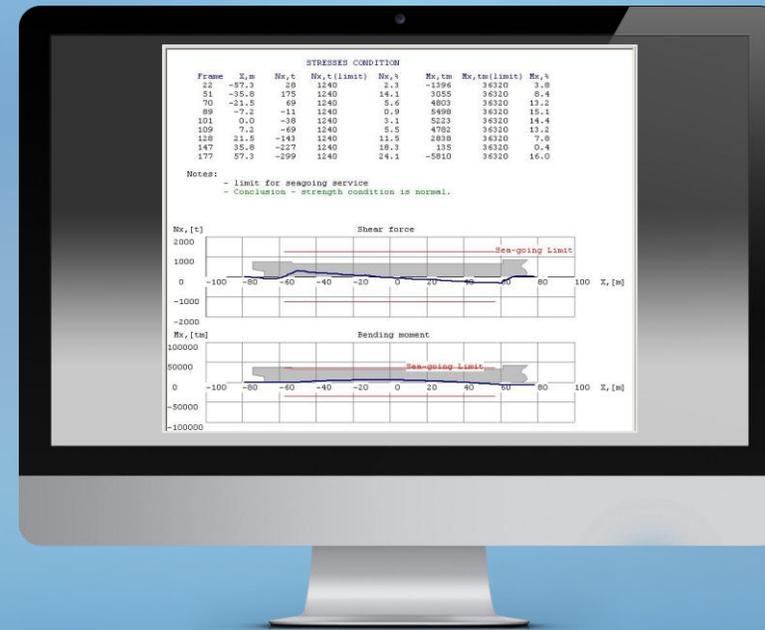
UPU (Universal Power Unit)



Loading & Stability Computer - TSS/MasterLoad

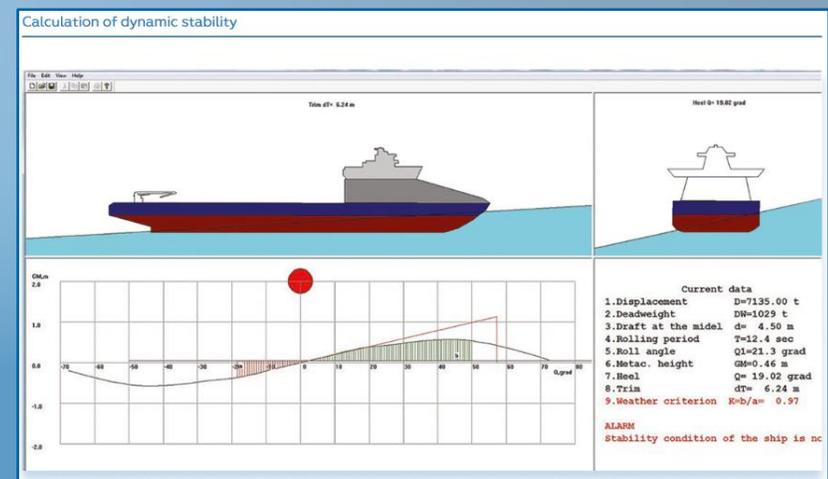
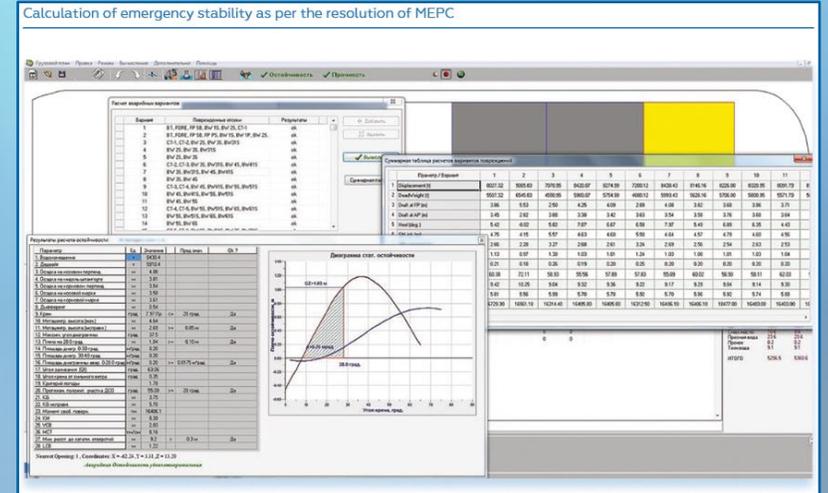
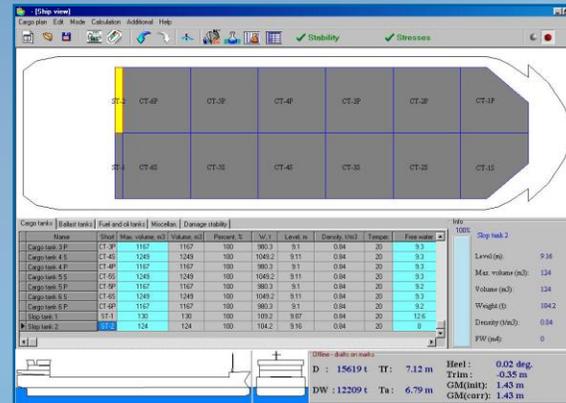
FEATURES AND FUNCTIONS

- Online / Offline modes
- Tank and Loading Status
- Stability & Stress calculations
- Damage Stability



FEATURES AND FUNCTIONS

- 100% own development
- API Marine works directly with Class for approval
- New building or retrofit/upgrade applications
- Meet all requirements for MARPOL ANNEX I REGULATIONS 2016



Sensors for Critical Applications in Harsh Environments

FEATURES AND FUNCTIONS

- Designed and manufactured for marine applications
- High quality and reliable automation systems starts with good sensors
- Patented technologies



TGD SERIES

TGD™

- Tank Gauging Device (Level, Pressure & 3 X Temperature)

TGD-R™

- Tank Level Radar

TGD-L™

- Tank Gauging Device (Level)

TGD-TP™

- Tank Gauging Device (Temp/Pressure)

LEVEL SWITCHES

UTS™

- Ultrasonic Tank Switch

TLA™

- Tank Level Alarm
(95%/98%)

TRANSMITTERS

UPT™

- Universal Pressure
Transmitter

UTT™

- Universal
Temperature
Transmitter



Reference Project - Bulk Carrier

Type of vessel	63500 / 64000 DWT
Shipyard	Nantong XiangYou & others
Owner	Various
No. of projects	40+

API SCOPE OF SUPPLY

- Tank Level Gauging System
- Valve Remote Control System



API Marine Bulk Carriers Summary

- Integrated and flexible solution
- Integrated “one-stop-supply” = less problems for the shipyard
- All sensors and key components are 100% own development - no 3rd party sensors
- High quality sensors = the heart of the system
- API Marine scope of work: initial proposal phase to final commissioning
- (Class approval drawing & FAT)
- Proven track record
- High reliability and robust design
- Competitive solution!



API
MARINE

QUALITY - RELIABILITY - SAFETY