

Yokogawa Marine Business

Controller

Measurement

CENTUM VP



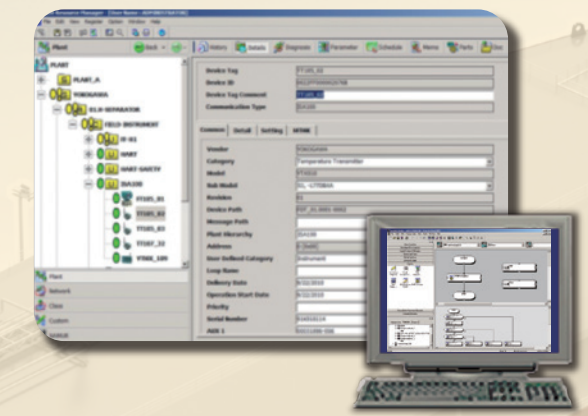
- ◆ Core platform of LNG carrier IAS operation. With its flexibility and super-reliability.

STARDOM



- ◆ Reliable process control PLC for several ship types.
- ◆ IEC61131-3 compliant programming.
- ◆ Extensive regulatory control libraries cultivated throughout Yokogawa's DCS history

PRM



- ◆ Platform of asset excellence initiative
- ◆ Aims to improve operations and maintenance and maximize the reliability and availability of plant assets by achieving greater



- ◆ Wireless flexibility broadens the world of measurement and control to new fields that had been given up due to place restrictions and wiring cost problems.
- ◆ Yokogawa field wireless solution converts wired device to a wireless device.

ProSafe-RS



- ◆ SIL3 Safety controller.
- ◆ Using for safety system, fire & gas system, and HIPPS in the offshore industry.

YS1000 Series



- ◆ Can be tailored for various applications by running a user program.

DPharp EJA and EJX Series



- ◆ Provides a wide range of flow, pressure and temperature measurement.
- ◆ The field-proven solution is available for various process measurements.

ROTAMASS Total Insight



- ◆ The most robust and durable design for precise measurement in high pressure applications.
- ◆ Mass flow rate can be measured directly.

Solution / Service

Global Service

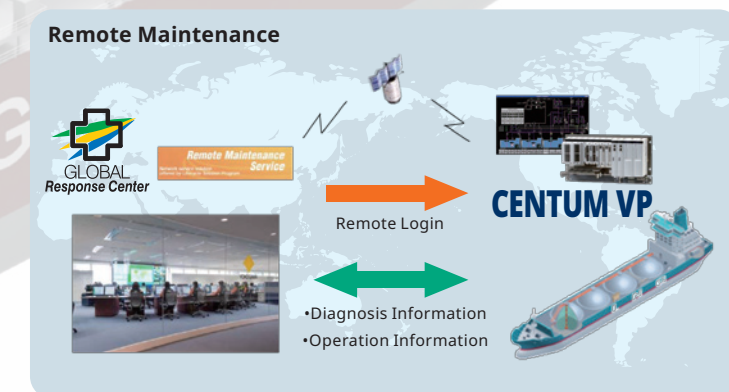
Yokogawa supports you in every location.

Our service offices provide the first-line of. A worldwide network of Yokogawa Response Centers, 230 service offices, and more than 2,500 service engineers provides a prompt response to all kinds of customer inquiries on an around-the-clock, 365-day-per-year basis.



Remote Maintenance

Remote maintenance is an ideal method to identify the problem on board and minimize operator's trouble shooting time.



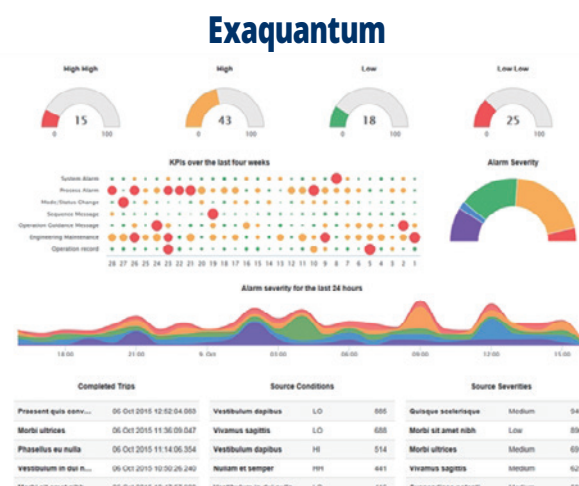
Yokogawa service engineer can remotely log in to onboard CENTUM via VSAT. The operator can make immediate and precise action with Yokogawa consultation. Safest security measures are built-in to the onboard connection.

Data Analysis

Yokogawa provides business benefits to officers in fleet operation.

Exaquantum is one of the most comprehensive Plant Information Management Systems (PIMS). Exaquantum can acquire data from all facets of process and transform that data into easily usable, high-value, widely distributed information.

- ◆ Onboard real-time process data in IAS can be transformed into usable.



Security Measure

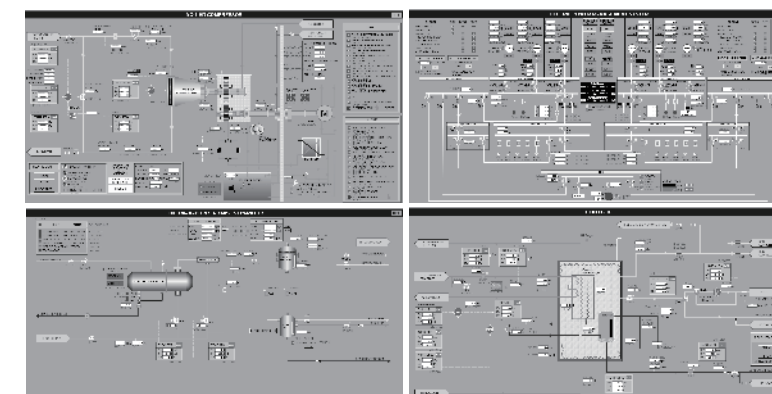
Threat to cyber security is increasing. Yokogawa will protect you. Like a Super HERO.

Security risks are evolving continuously. Yokogawa provides a service lifecycle solution for cyber security. This is to ensure that the security measures and deployments are continuously enhanced, monitored and inspected.



Marine Experience

Yokogawa has been challenging against the various types of LNG Carriers.



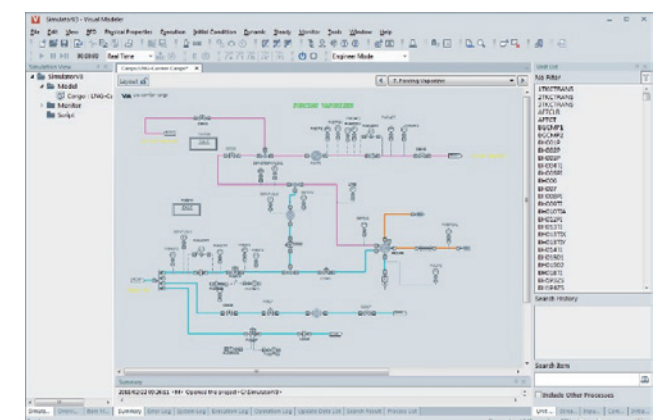
Yokogawa collaborated with various package suppliers. This is our strength. We realized your requirements.

- ◆ Integration of Boiler control
- ◆ Gas management
- ◆ Compressor control
- ◆ Power management
- ◆ FGSS control
- ◆ Re-liquefaction control, etc..

Dynamic Simulator

Training simulator for operators.

Yokogawa is driving the advanced usage of the dynamic simulator which can be used for multiple purposes throughout the lifetime of the LNG carrier. The dynamic simulator is ideal for operator training, but dynamic simulator can also be a useful tool to validate the gas system design by allowing rigorous system testing under all operating conditions



Network Solution

Real Time Fleet Monitoring

Yokogawa provides business benefits to officers in fleet operation.

CI Sever is the Supervisory Control and Data Acquisition (SCADA). CI Sever can acquire data from all facets of a process and transform that data into easily usable, high-value, widely distributed information.

- ◆ Onboard real-time process data can be transferred to onshore office via VSAT.



OpreX™

Through the comprehensive OpreX portfolio of products, services, and solutions, Yokogawa enables operational excellence across the enterprise.

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