

STEERING CONTROL SYSTEM

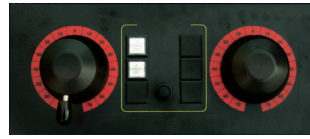
BRIDGE

Bridge wings/aft/auxiliary

FU, IP22/IP56 Independ./Synchro., IP22/IP56



144x144



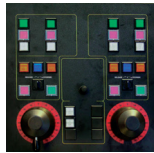
336x144



KONGSBERG

Forward bridge panels

IP22

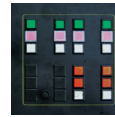


336x336

- Start/stop 4 pumps
- Independent/synchronised-steering
- Aft emergency steering
- Mode selection

Option: Selection between two rudder angles

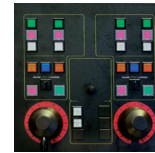
IP22



240x240

- Start/stop 4 pumps
- Option:
Selection between two rudder angles

IP22



336x336

- Start/stop 4 pumps
- Independent/synchronised-steering
- Aft emergency steering
- Mode selection

Option: Selection between two rudder angles

+/-10VDC rudder order signal and/or on/off rudder order signal to VDR



+/-10VDC rudder order signal from autopilot, DP and joystick

+/-10VDC rudder order signal from autopilot, DP and joystick

OPTIONS

- Deliver complete systems or portion of these.
- Number of steering station according to customer requirements.
- Selection between low/high rudder angle.
- Rudder automatic to zero when going astern.
- Emergency steering cabinet (necessary when normal emergency steering in steering gear room is not possible due to space limitation).
- Control system for tankers above 100.000 dwt according to IMO requirements.

KONGSBERG STEERING GEAR

Steering control system, twin rudder vessel

General

The steering control system is designed according to latest SOLAS and IMO requirements. It is type approved by DNV, BV, GL, LRS, RINA and ABS (for other societies, approval is achieved from case to case). We have both steering control systems for solenoid operated valves and frequency controlled pumps/motors by use of frequency converter. Non-follow-up (NFU) steering and follow-up steering (FU) are available (FU only for frequency operated pumps). Systems for single rudder vessels and twin rudder vessels are available.

ENGINE CONTROL ROOM

Indication panel

IP22



144x144

144x144

STEERING GEAR ROOM

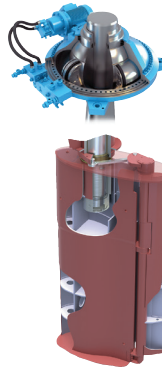
Motor controller no. 1

IP44



Feed back unit no. 1

IP44



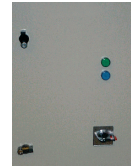
Feed back unit no. 2

IP44



Motor controller no. 2

IP44



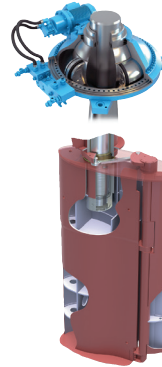
Motor controller no. 3

IP44



Feed back unit no. 3

IP44



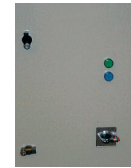
Feed back unit no. 4

IP44



Motor controller no. 4

IP44



Steering system contents

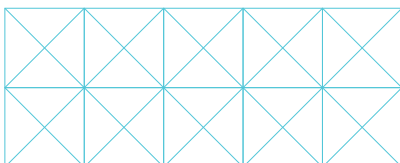
- Main control panel with pump start/stop, emergency steering, NFU/FU-steering, mode selection, selection between low/high rudder angle.
- Control panels on bridge wings, aft and auxiliary steering position with NFU/FU-steering and mode selection.
- Control system unit for bulkhead mounting on the bridge or adjacent to.
- Pump indication panels for desk mounting in engine control room.
- Motor controllers for bulkhead mounting in the steering gear room.
- Feed back units mounted on the steering gear.

Description

- Control panels are provided with overlay (color RAL 9011), flush mounted components connected to printed circuit boards and with terminal plate wired to panel with 1.6m cable.
- Control system unit (color RAL 7035) with following functions: emergency steering circuit, start/stop, alarm signals, selection of steering stations/modes, interface to external steering systems and to VDR.
- Motor controllers (color RAL 7035) for start/stop of pump units, transfer of remote steering and start/stop signals, voltage free alarm contacts, isolating switch and switch for selection between remote control, stop and local control.
- Feed back units with limit switches and feed back potentiometers.
- The system is powered internally from motor controllers.

Interface

- Autopilot, signal type from autopilot: voltage free digital contacts (NFU) or +/-10VDC analogue signal each rudder (FU).
- Dynamic position system, signal type from DP: +/-10VDC analogue signal for each rudder + voltage free take over contact.
- Joystick, signal from joystick: +/-10VDC analogue signal for each rudder + voltage free take over contact.
- Voyage data recorder (VDR), signal type to VDR: +/-10VDC analogue and or digital steering command signal, voltage free pump running contacts.



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