# Propulsion control system

180

Quality and precision

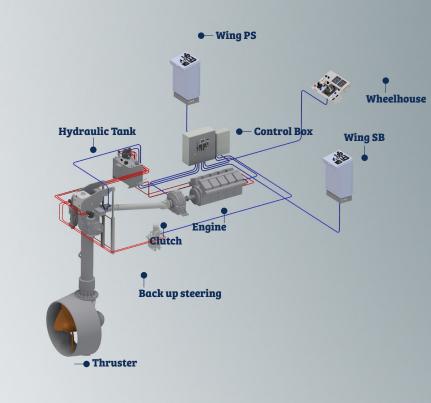
SCHRAVEN BV

**The vessel's propulsion drives** may vary from diesel engines to electric motors.

Schraven is specialised in the development of 100% custom-built control systems for thrusters and can provide an electric-hydraulic control system as well as a full electric control system.

## **Steering system (Azimuth thruster)**

Steering system is an Full Follow-Up (FFU) remote control system. The steering is controlled by a lever which allows the operator to control the steering angle, engine speed and clutch (dis)engagement by one hand. This steering system operates proportional. This means that a small steering angles will be electronically transformed in smooth steering movements and big steering angles will be transformed into fast steering movements including an acceleration and deceleration ramp. The system can be switched over to a Non Follow-Up (NFU) control system.



# Schraven control systems available for:

- Azimuth/steerable thrusters
- Navigator units
- Retractable azimuth thrusters
- Combi thrusters, Retractable azimuth/transverse thrusters
- Pump jets
- Transverse thrusters
- Controllable pitch propellers

Our control systems can be equipped with an electrical shaft system.

The purpose of an electrical shaft system is to synchronize the control levers of all operating positions, such as Port wing, Bridge control station and Starboard wing.

Our control systems are adapted to connect to external systems, such as Autopilot-Systems, DP-Systems, central monitoring/alarm systems and VDR-systems.



Wasa Dredging Oy, Sinann & Boann





The control panels are customized to

- DE or EN) or with pictograms
  User specific requirements possible
  Fully dimmable panels

it no longer meet the current standards

called Retrofit!

well suited for this type of projects. In order to come to a specific project design, both the propulsion and control system as well as the accompanying preconditions for the design are taken

process, such as; engineering, programming, hardware realisation and the commissioning on site.



**Uniworld River** Cruises Ltd., **River Princess** 



**Van Oord ship** management b.v., Jan Leegwater & Jan Blanken



# Schraven is a family company for more than 45 years

# that offers worldwide:

- **&** CUSTOM-BUILT DECK MOUNTED THRUSTERS
- **&** CUSTOM-BUILT STEERING SYSTEMS
- ★ SERVICE OF ALL AZIMUTH THRUSTERS
- **\*** SERVICE OF ALL BOW-THRUSTERS
- **&** SUPPLY OF SPARE PARTS

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