

Case Study 294: **45m Crew Boat**

SPECIFICATIONS

Waterjet:	DJ290 x4
Engine:	CAT C32 ACERT 1450 bhp @ 2100 rpm
Gearbox:	MGX 6620SC 2.44:1
Vessel:	45.0m L.O.A 42.0m W.L.L 160t (light) - 385t (laden)
Performance:	30+ knots (light)



Petrobras P3 – 45m Fast Crewboat and Oilfield Support Vessel, (Brazil)

This 45.0m crewboat, designed by Incat Crowther and built by Arpodor in Brazil, will transport 60 crew and cargo at a maximum displacement of 385t. Powered by quad Caterpillar C32 Acert marine diesels this latest vessel will set new standards in terms of performance, maneuverability at greatly reduced noise+vibration levels.

For maximum service life in this arduous commercial application the **DJ290** waterjets have been specified with stainless steel pump assemblies fitted with 29" (737mm) high volume single stage axial flow impellers. These waterjets provide excellent high-speed efficiency with superior cavitation margins allowing full power application at any load condition and also at zero speed for maximum possible thrust during docking and station keeping maneuvers at sea. Doen's pre-fabricated aluminium intake duct installation combines maximum vessel integrity with simple installation.

Each **DJ290** has its own fully integrated hydraulic system providing steering and reverse control. All of the hydraulic equipment including cylinders hydraulic and associated hose connections are inboard mounted. All hydraulic pumps are directly driven from the gearbox PTO's.

Vessel propulsion control is managed using Doen's own **CAN BUS - Control** system. Configured for quad engine - twin station; the system simply combines primary control of engine throttle and gear command with the waterjet steering and reverse functions. Additionally the system provides the operator with all necessary monitoring, alarm and back-up control functions.

The second (rear facing) station has been fitted with Doen's **eDOCK** joystick control system. This provides a single joystick lever control that simultaneously actuates and controls waterjets and engines for precise and intuitive low speed maneuvering control.

The waterjets and control system are supplied to **RINA** ✕ HSC(A) MON special crew boat.