DJ170HP Waterjet

Performance **Reliability** Simplicity

Case Study 126: **Water Taxi**

SPECIFICATIONS

Waterjet:	**DJ170HP x2**
Engine:	**CAT C18** **533kW @ 2100 rpm**
Gearbox:	**ZF 550**
Vessel:	**18.5m L.O.A** **16.3m LWL** **22 tonne**
Performance:	**25 knots**

Five Nigel Gee 18.5m Water Taxis for service in Nigeria

Estaleiros Navais de Peniche yard on Portugal's Atlantic Coast built five of these BMT Nigel Gee designed 18.5m catamarans ordered for a Rivers State Water Taxi Service in Nigeria to carry up to 70 passengers. The vessels are used to provide transport to remote riverine regions where low draft was required. In these regions there is extensive oil and gas industry but little or poorly developed road infrastructure exists to provide access.

Power is provided by twin CAT 533kW diesel engines, which are coupled to the DOEN waterjets through ZF marine transmissions. A reduction ratio is used to optimise the waterjet impeller selection and the gearbox also provides the vessel with disengagement and a back flushing capability.

The DOEN 17.0-inch (432mm) diameter high volume axial flow impellers provide highly efficient propulsion that delivers excellent cruise performance and extended range in this application under all load conditions.

The DOEN balanced steering nozzles are controlled using a conventional helm power assisted hydraulic steering system. Inboard cylinders are mechanically connected to the waterjets inboard steering tiller. This provides the vessel with simple and easy control at all speeds and especially when docking. A simple mechanical tie bar is used to connect the waterjets providing synchronized steering at all times.

The DJ170HP waterjets are fitted with DOEN's Rotary Servo Control (RSC), which is a proportional hydraulic control system providing simple and exact follow up control of the waterjets reverse buckets, by conventional lever. This system has fully integrated hydraulics with in built cooling; bulkhead mounted steering and reverse cylinders and all connections inboard and protected from corrosion. Conventional control levers using push pull cables operate this system.

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