

Case Study 206: **22.4m Patrol Boat**

SPECIFICATIONS

Waterjet:	DJ220 x2
Engine:	MTU 12V 183 TE93 846 kW @ 2400 rpm
Gearbox:	ZF BW165 2.00:1
Vessel:	22.4m L.O.A 19.4m W.L.L 45 t (full load)
Performance:	30 knots



VIETNAMESE CUSTOMS DEPARTMENT – Fast Patrol Boats

With a draft of only 1.20m this waterjet Patrol Craft is able to operate in a wide range of coastal and inland waterways and if required may also be beached without special docking equipment. Powered by twin MTU V12 diesel engines coupled to the **DOEN DJ220** waterjets this vessel has a cruise speed of 27knots and a sprint speed of 30knots.

DJ220 waterjets fitted with 22" (560mm) single stage high performance axial flow impellers; these waterjets deliver excellent high-speed efficiency with superior cavitation margins and efficiency at lower speeds and cruise conditions. Doen's pre-fabricated aluminium intake design made it possible to customise the inlet ducting and shaft line so as to facilitate waterjet installation into the unusual hull form without any compromise to the vessels' or waterjets performance.

The fully integrated hydraulic systems operate the waterjet reverse and steering functions. Twin PTO driven hydraulic pumps supply the tank mounted control valve bank with for reverse function. A stand alone steering pump is driven directly off the engine. All steering and reverse cylinders and their associated hydraulic lines completely mounted inboard.

The waterjets are fitted with DOEN's Jogstick Reverse System (JRS); an electro hydraulic control system that provides non-follow up jog lever control of the waterjets reverse buckets. An analogue indicator is used to show the reverse bucket position. Steering is powered hydraulic by conventional helm wheel. The vessel is also fitted with and electronic throttle Control System. Configured for twin engine - twin station; this electronic control system provides primary control of engine throttle and gear command control functions.

The waterjets and control system were supplied to **USL Code 2B**.