

Case Study 163: Norwegian Work Boat

SPECIFICATIONS

Waterjet:	DJ110 x1
Engine:	Nanni V8.370 370mhp @ 3800rpm
Gearbox:	ZF63 (1.265:1)
Vessel:	8.59m L.O.A 8.17m L.W.L 4.2t
Performance:	33 knots



Skarsvåg 28P

Working closely with our local partner, SEA-TEK AS. (Norway), Doen Waterjets has proudly supplied the waterjet propulsion system for this high speed workboat.

The Norwegian boat builder **Skarsvåg Boats AS** caters to a wide range of industry sectors such as defense, fish farming, deep-sea fishing, aquaculture, chartering, etc. Advocating this boat for customers who need to move quickly from point A to point B, Skarsvåg used to offer this vessel with outboard engines. As a fast boat operating in 30knot+ Knot speed regime, waterjet proved to be a better choice for driving this vessel, offering improved efficiency and fuel economy compared to the outboards. Other factors for consideration were lower noise/vibration, superior maneuverability, controls, safety and maintenance.

Power is provided by a single Nanni diesel, which is coupled to the **DOEN DJ110** waterjet through ZF marine transmissions. The DOEN 11-inch (280mm) diameter high volume axial flow impellers provide excellent overall and high speed efficiency at reduced fuel consumption whilst delivering exceptional cavitation margin at low speed in the fully laden condition.

The Doen balanced steering nozzle gives fast, precise response with minimal input force. This is simply controlled using a conventional manual hydraulic steering system, with an inboard cylinder, which is mechanically connected to the waterjets inboard steering tiller. This provides the vessel with exceptional ease of control at all times, whether it's docking at low speed or racing to the destination at top speed.

The DJ110 waterjet is fitted with DOEN's **Rotary Servo Control (RSC)**, which is a proportional hydraulic control system providing simple and exact follow up control of the waterjet reverse bucket, by conventional lever using push-pull cable. This vessel system has fully integrated hydraulics using a jet-driven hydraulic pump, oil cooler, jet mounted control valve and reverse cylinder.