

Press Information

METALOCK ENGINEERS ALL AT SEA WITH IN-SITU REPAIR FOR SEISMIC SURVEY VESSEL

Due to the limitations posed by a busy seismic data acquisition programme, Metallock Engineering sent engineers to Ghana to in-situ machine two winch brake drums on the SR/V Veritas Viking II whilst it was at sea, en route to Cameroon in the Atlantic Ocean.

The Veritas Viking II is part of a fleet of seismic survey vessels operated by Veritas DGC Inc, of Houston, and two of the upper deck 45-tonne capacity winch brake drums had lost efficiency due to severe scoring. Rather than immediately opt for replacement, Veritas contacted Coventry-based Metallock Engineering, a company it had used previously for line boring work in Aberdeen, to ascertain if the drums could be machined to restore winch braking efficiency and regain accurate control of the streamer cables and paravanes during towing operations.

Veritas provides integrated geophysical services to the world's oil and gas exploration companies and is a world leader in seismic data acquisition in all environments.

The two winches, one port and one starboard are used to control towing of the paravanes which control the in-water spread of seismic acquisition equipment. Eight hydrophone streamer cables up to 8km long are towed from deck level using a special fibre rope over the vessel sides. Each of the winches has a 1.7m diameter, 200 mm wide cast brake drum, both of which had work hardened and scored. The hardness ruled out single point tooling and metal deposition and remachining was not an option due to the composition of the base material. Once on board, the Metallock team set up one of their portable grinding units, supported on a special framework to ensure that the grinding machine and drum centrelines were on a common datum to assure optimum finish. The drum was revolved slowly using winch hydraulic drives. On completion of the first drum, the grinding set-up was moved to the second one for a repeat operation. 4mm of diameter on each drum was removed to clean up the surfaces over a period of, two days working round-the-clock with two two-man Metallock teams.

Whilst this work was progressing, Veritas fitted new thicker braking materials to the brake bands to compensate for the slightly smaller drum diameters and restore original clearances. When reassembled the winch brakes were checked and in the words of one of the Veritas engineers, "were as good as new". Also the work had been carried out at a fraction of the cost of replacement and within the timeframe and budget allocated.



Veritas Viking II off Capetown

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