



Whitepaper

Self-Unloading Vessel Equipped With Bucket Wheel

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A novel self-discharging system is helping to ensure rapid turnaround and maximum utilisation of the MV Cambourne for her owners, Civil & Marine Ltd. of Greenhithe, Kent. The system is based on a bucket wheel designed and manufactured by Strachan & Henshaw, which discharges dredged sand and gravel from the hold on to a ship-mounted conveyor system designed by British Ropeway Engineering Company (BRECO). The ship and its discharging equipment have been designed as a complete integrated system from the original concept. This has produced a remarkable efficient vessel which can operate with little dependence on quayside installations.

The increasing amounts of sand and gravel to be extracted from the sea bed around the UK led British Ropeway Engineering Company (BRECO) to pioneer the development of self-discharging systems for aggregate dredgers and other vessels used for bringing the material ashore from the dredging grounds. Among the vessels to use this equipment was the MV Cambrae, owned and operated by Civil & Marine Ltd.

Experience with the Cambrae led Civil & Marine to continue the line of development on their latest vessel, MV Cambourne. For this they have combined the resources of BRECO (a member of the Capper Neill Group) with those of

Strachan & Henshaw to develop a self-discharging ship which is designed around an excavating bucket wheel coupled to an on-board conveying system. The result is a vessel which can unload her cargo of 2,600 m³ of material on to a shore-going conveyor system in under three hours (Fig. 1).