Bridon-bekaert Ropes Group supplied a pair of Modulift spreader beams with a series of sheathed spiral strand mooring lines manufactured at the former's Neptune Quay facility in Newcastle, UK for Bluewater Energy Services.

Seven 40t units in total are bound for the Aoka Mizu, a Floating Production Storage and Offloading (FPSO) site situated in the Lancaster field, located offshore in the West of Shetland area. Bridon-bekaert Ropes Group is contracted to design and manufacture the mooring lines for the project. FPSOs are typically based on a (converted) oil tanker hull. They are equipped with hydrocarbon processing equipment for separation and treatment of crude oil, water and gases, arriving on board from subsea oil wells via flexible pipelines.

The order, including one spare mooring line, was lifted aboard ground transportation at Neptune Quay using the spreader beams, which travelled with the units to the Lancaster site. Discovered in 2009, the Lancaster field has water depths of 160m and is owned and operated by Hurricane Energy, the field is Hurricane’s first basement discovery located 4,000 ft. beneath the seabed.
The two MOD 70 spreaders were supplied at 2.11m-wide and 4.1m with custom length struts. Every Modulift beam consists of a pair of end units and a pair of drop links, with interchangeable struts that can be bolted into the assembly between the end units to either lengthen or shorten the beam to suit the requirements of the lift—also making them reusable at different spans. The MOD 70 range offers up to 70t at 10.5m or 33 ft. and up to 14m or 45 ft. at a lower capacity.

Simon Frost, senior project manager at Bridon-bekaert, explained that an additional Modulift beam was required to lift a single reel that contained the spare line. Modulift slings and shackles completed the below-the-hook solution.

The 129mm mooring lines, with a final diameter of 151mm and a minimum breaking load of 1,713t, boast an overall length of 145.5m pin to pin. They are fitted with forged open and closed sockets, spooled onto seven transportation / installation reels, and have a packed piece weight of circa 40t. In addition to the beams, the order included rigging for reel handling.

They were lifted using a 121t capacity Liebherr LHM 420 onto transportation provided by ISS. They travelled by road to Blythe and then to Lerwick by sea. Offset centres of gravity were accommodated by Modulift’s below-the-hook rig to accommodate the COG scenarios on the dual reels during installation.