

# Navigation and Survey Support for Windmill Installation



Parker Maritime, Norway, provided the Seajacks team with navigation services, survey support during installation of the monopiles and transition pieces (TP), and crane monitoring services during monopile up-ending.

Parker utilised its [ParkerPMS](#) computer and software technology for data collection and presentation. ParkerPMS was the platform for the radio link of data between the TP and Bridge. Other technologies used were: [iXBlue Octans](#) for heading and motion, GPS for heading control of the TP and positioning of the monopiles, MRU for motion and Leica Total stations for the inclination of the monopiles.

Parker joined the [Seajacks](#) team in August 2012, and the last transition piece was installed in June 2013. The monopile installations were completed with two engineers, and one engineer was needed for the transition piece installations.

The [Energy Products Division \(EPD\) of Parker Hannifin](#) provides project solutions with project management for global energy recovery. Solutions include: marine hoses, power cables, mooring lines, high-pressure hoses, custom umbilicals, surveying, metrology and service.