



WOODS HOLE OCEANOGRAPHIC INSTITUTION

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UNOLS East Coast Winch Pool Manager

Maximum Capability Document

ECWP TSE Mooring Spooler SD-70

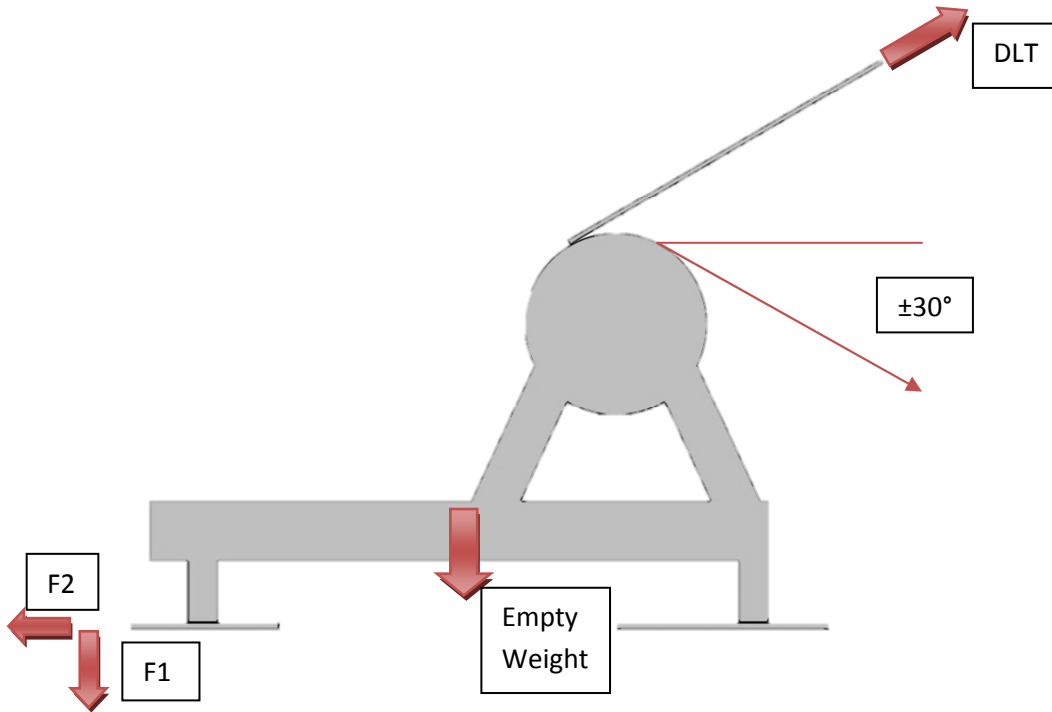
This document has been prepared in accordance with Appendix B of the UNOLS RVSS. Historically, this machine has primarily been used for mooring recovery. Per Appendix B this machine is rated for "Station Keeping - Deep Water" (Section B.3.5.6) which includes recovery of moored buoys. The East Coast Winch Pool does not approve Mooring Spoolers for use with oceanographic tension members, therefore, Appendix A does not apply. However, since there is no tension monitoring system on this winch, the East Coast Winch Pool recommends that the Deck Safety and Winch Operator requirement of Table 6.1 (Factor of Safety, FS, of 5.0) of Appendix A be followed as a minimum. Due diligence is required by the User to verify through calculation that normal operations will not exceed MPT and that DLT is never exceeded.

System Characterizations

Empty Weight	6,500 lbf
Maximum Weight	10,500 lbf
Maximum Pull at Bottom Layer / MPT	7,000 lbf
Maximum Continuous Allowed Structure Load / DLT ¹	15,300 lbf
Maximum Speed at Bottom Layer	9.75 m/min
Maximum Speed at 48 Inches	19.5 m/min
Optional Spooling Brake Maximum	1,000 lbf
Maximum Oil Operating Temperature	180 F
Power Requirements	3 Phase 480VAC 60 Hz 60 Amp Circuit

¹ At this tension the brake will slip causing the winch to render cable

Free Body Diagram



At DLT
F1 = 1,125 lbf
F2 = 850 lbf

Forces are maximum forces per bolt, at DLT, for a 16 bolt hold down pattern (Rows spaced at 24", 72", and 96"). Analysis is good for a vertical fleet angle of $\pm 30^\circ$ and a horizontal fleet angle of $\pm 8^\circ$.

