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SWI-TEC
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Date:	Our reference:	Your reference:
2016-09-27	4740-14-12636-408	SWI-TEC-Mastlift

Technical Statement:

Drum Winch SWI-TEC- Mastlift, Drum Winch

Manufacturing Plant: SWI-TEC, Neveta Nautica S.L., Poligono 9, Apartado 51, E-07680 Porto Cristo (Mallorca)

Sales office: SWI-TEC, Neveta Nautica S.L., Poligono 9, Apartado 51, E-07680 Porto Cristo (Mallorca)

Technical Data:

- Working height, 13m / 25m
- Mass/Weight: 220x180mm / 6,7kg; 220x200mm / 7,6kg
- Load max.: 150kg
- Used rope: support cable \varnothing 6mm - Dyneema, Handrope \varnothing 10mm - Polyester (endless)
- Gear ratio: 1:10
- Safety windings: 3
- Drum- \varnothing : 60mm (fluted)
- Application / use: Vertical
- Purpose: hoisting and lowering of a person with concurrently applied secondary safety device against falling hazard
- Operating place: recreational crafts, i.e. application not subject to classification, work safety regulations, etc.
- Ambient temperature limits (manufacturer info): -30° C and +65° C

Test specification/Test basis for design test:

- 1.) Datasheet SWI-TEC-Mastlift 13m/25m, 2016-07-01
- 2.) Original operating instructions for drum winches SWI-TEC- Mastlift, 2015-01-08

And based on:

- 3.) GL Classification- and building regulations, VI supplementary regulations and guidelines, 2 lifting equipment, 2 lifting equipment of ships and offshore vessels
- 4.) DNVGL-ST-0377 Standard for shipboard lifting appliances
- 5.) DNVGL, Guideline Dyneema fibre rope – safety, bending radius (adapter: STHE, 2015-04-10)

Drawings:

- ZSB SWI-TEC-Mastlift 13m, Rev B, Page 1 (similarly 25m)
- ZSB SWI-TEC-Mastlift 13m, Rev B, Pages 2
- ZSB SWI-TEC-Mastlift 13m, Rev B, Pages 3

Scope: Review of SWI-TEC-Mastlift calculations (materials, safety factors), main shaft (ultimate strength only), drum, cable connection (3 turns), load brake or work brake

Conclusion: The winch **SWI-TEC-Mastlift** meets the technical specifications of the data sheet. It is suitable for the intended use – hoisting and lowering of persons.

Note: The "ratchet brakes (ratchet and pawl mechanism)" is acting as clutch when lifting or lowering. It does not work as mechanically and operationally independent second brake (ref. GL Rules Part VI, Chapter 2, Section 9).

The operating instructions, in particular the instructions for operating the winch, are an integral part of the intended use. Special attention needs to be paid to make sure that rope is winded up properly; lifting operation must be stopped immediately in the event of overriding.

Usage Note:

In operation, an additional and independent system against free fall hazard needs to be used, e.g. a fall arrestor.

The review was performed by Dipl.-Ing. Frank Poetsch, Principal Approval Engineer, Machinery (MCADE698).

for **DNV GL**



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