

Appendix – A

Monte Anaga SPI boom – Technical Specifications:

Boom Set, Hydraulic and Air Systems

Attached to the Tender Specifications

(Enclosure 1 to Invitation to Tender No EMSA/OP/13/2016)

Disclaimer

Any specifications and/or graphic material must not be understood as a commercial endorsement by the Agency of any given piece of equipment and/or manufacturer/supplier.

If there is a contradiction between this Appendix and the manufacturers' manuals, the manufacturers' manuals take precedence.

1. Lamor-NorLense Boom NO-800-R

Manufacturer:

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06150 PORVOO
FINLAND

Tel: +358 (0)20 7650 100

Fax: +358 (0)207 650 129

Email: info@lamor.fi

Website: www.lamor.fi

Year of purchase: 2006

The system includes 2 units of 250m of boom on storage reels with all necessary deployment equipment including air inflation system. The system could be stored in and deployed from a dedicated ISO container. The space required on board is at a minimum as the boom is deployed directly from the reel over the side of the ship.

The boom systems are provided with ASTM adapters so that the booms can be, if required, easily connected to standard booms used in all the coastal states.

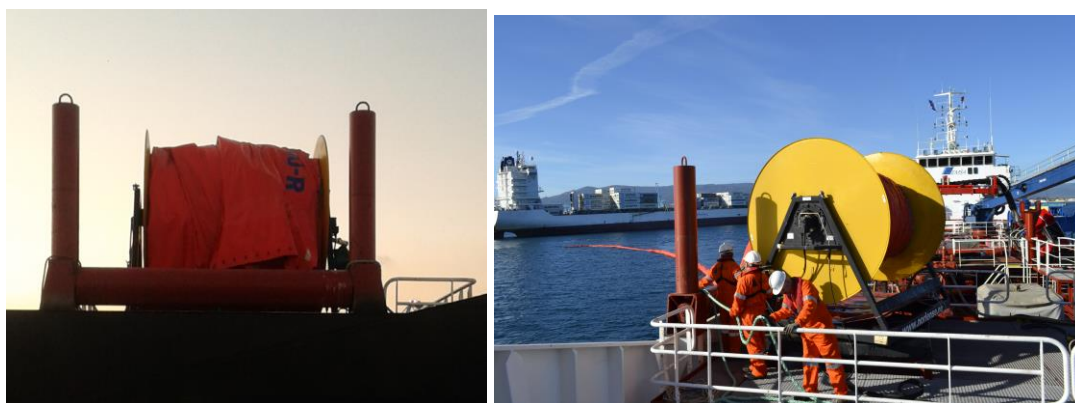


Fig. 6 NorLense Rapid Deployment Boom NO-800-R

The winch is arranged with pad eyes for lifting slings, and is normally bolted to the ship's deck. But the winches can be equipped with Container corners for quick and easy connection. The ship's deck will be equipped with the same fastening device.

The Lamor-NorLense Boom NO-800-R set includes the following components:

- Boom section;
- Towing set;

- Spare parts kit for the NorLense NO-800 R boom;
- Air supply/back-up air hoses;
- Boom winch LW 10.20;
- Hydraulic power pack LPP 50 D;
- Spares for the power pack LPP 50 D;
- Hydraulic hoses;
- Hydraulic compressor HKL 4100/8-113.

1.1 Boom section (to be replaced)

Table 1 Technical Specifications of NorLense NO-800 R

Freeboard	740 mm
Draft	1020 mm
Boom Height	1760 mm
Standard Length	250 m
End Connectors	Soft
Skirt Material	PVC Fabric (1250 g/m ²)
Colour	Orange
Flotation	Air (atmospheric pressure)
Weight	17 kg/m
Waterline Beam	800 mm
Ballast Material	13x100 Galvanised Steel Chain
Ballast Weight	3.5 kg/m
Storage Volume	10 m ³ /250 m
Operation: Personnel required	1 for Reel (and 1 towing vessel)
Deployment	Storage/Deployment Reel
Recovery and storage	NorLense 10 m ³ Storage Reel

1.2 Towing set and connexion for open U formation (to be replaced)

The towing set and connexion for open U formation includes all necessary parts for effective and safe deployment of the booms. All Tow sets come complete with connectors, shackles, rope and buoy.

The following components are included:

- 3 pcs connecting split links to the boom end
- 9 m connecting ropes (2 x 12 mm, 1 x 18 mm)

- 1 pc braided polypropylene rope 26 mm/50 m with 3.25 Tn shackle
- 1 pc buoy 400 mm.

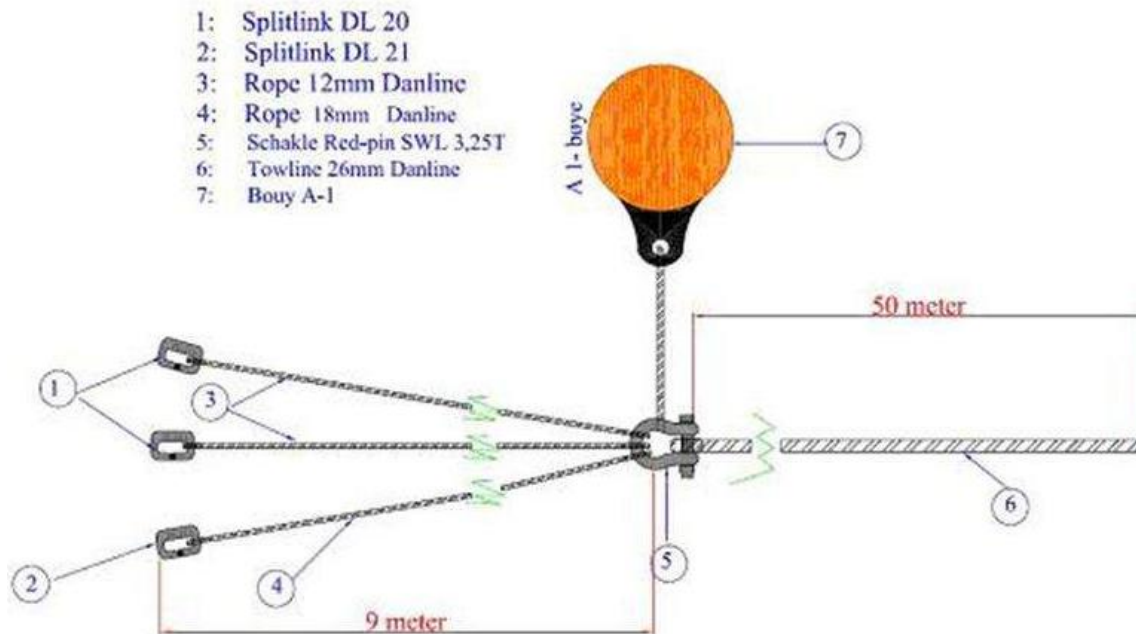


Fig. 7 Towing set (Source: Lamor)

1.3 Spare parts kit for the NorLense NO-800 R boom (to be replaced)

Boom spare parts kit includes all necessary items for field repair and maintenance.

1.4 Air supply/back-up air hoses (to be replaced)

Air supply/back-up air hoses x 30 m 2 pcs

1.5 Boom winch LW 10.20

Base and drum are built-up of steel profiles/plates. The drum has a spherical roller-bearing at one end. At this end, it is mounted a rotating union who allow supplying air to the boom, while the winch is running. At the motor side, the motor take care of the bearing. The winch can be turned 20 degrees to each side through a vertical axis. The winch is arranged with pad eyes for lifting sling.

Surface treatment: Primer and finish coatings. As option the steel construction can be sandblasted and metallized before painting.



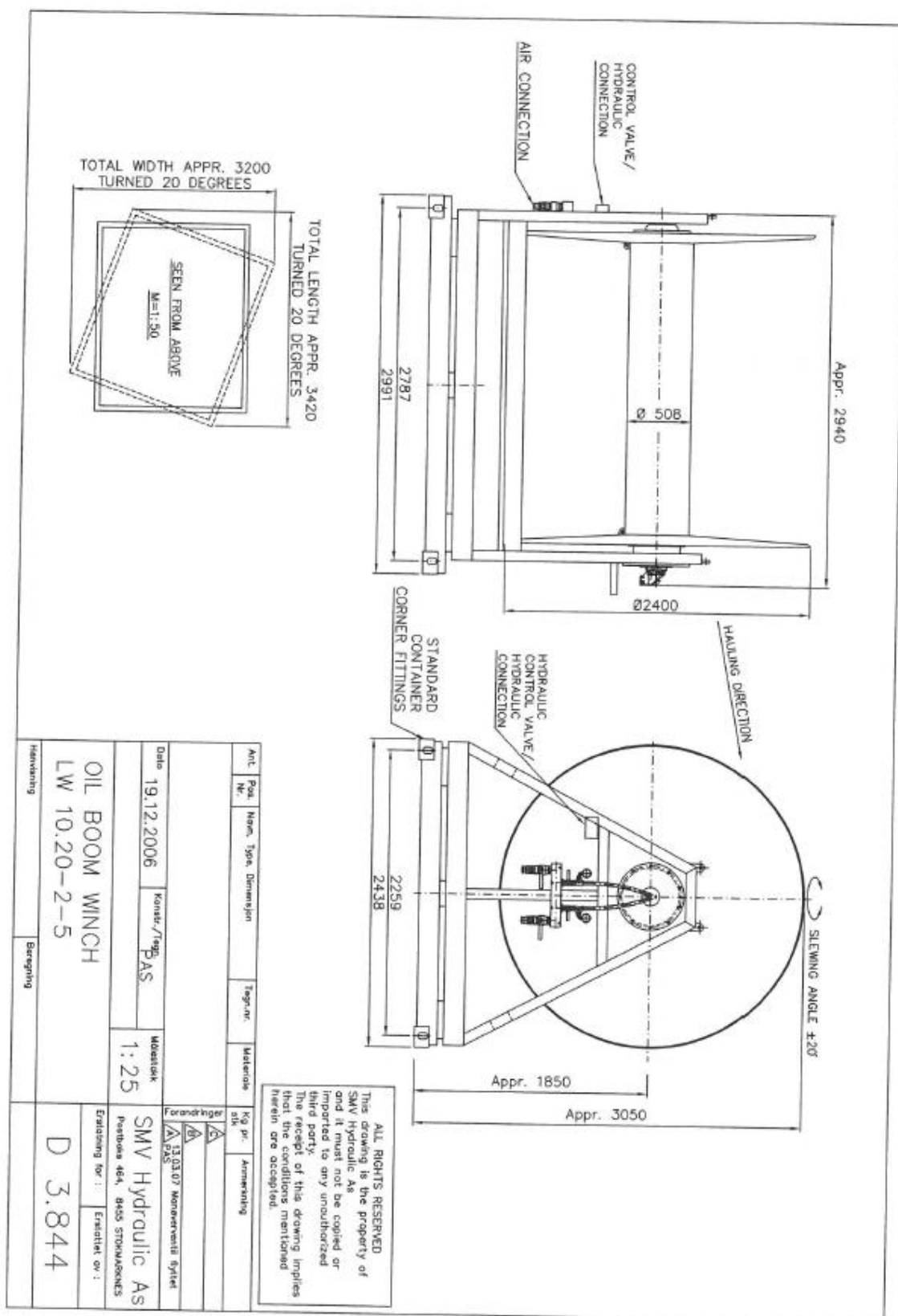
Fig. 8 Boom winch

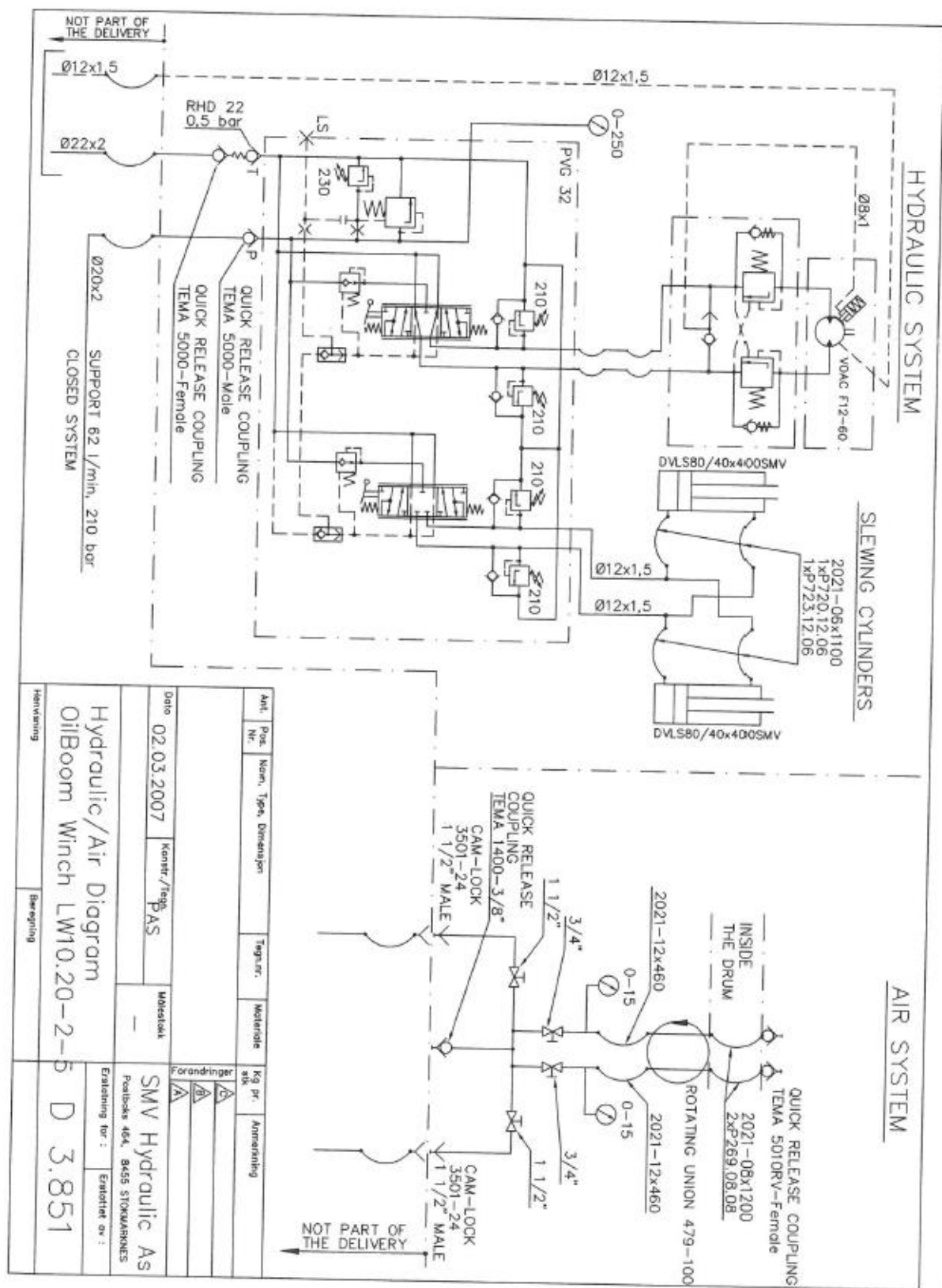
Table 3 Technical Specifications - Boom winch LW 10.20

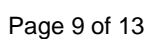
SPECIFICATION T-10.20-2-5

Oil boom winch 10 m³ ref. drawing D 3.844

Outside measurement:	Length	- appr. 2.940 mm
	Width	- 2.438 mm
	Height	- appr. 3.050 mm
Drum size:	Diameter	- 508 mm
	Flange dia.	- 2.400 mm
	Length	- 2.320 mm
Drum capacity:	10 m ³	
Pull:	Full drum	- 1.200 kp
Hauling speed:	0 - 15 m/min at empty drum	
Oil flow:	62 l/min	
Oil pressure:	210 bar	
Power requirement:	22 kW	
Drive:	Hydraulic motor with reduction gear and automatic hydraulic brake. Brake force stronger than pulling force.	
Manoeuvring:	Control valve and double brake valve is mounted permanently at the winch.	
	Dimension hydraulic connection:	<ul style="list-style-type: none"> - pressure Tema 5000 male - return Tema 5000 female - drain Ø12 Ermeto
	Dimension air connection:	- 1 ½" Cam-Lock male
Construction:	<p>Base and drum built-up of steel profiles/plates. The drum has a spherical roller-bearing at one end. At this end, it is mounted a rotating union who allow supplying air to the boom, while the winch is running. At the motor side, the motor take care of the bearing.</p> <p>The winch can be turned 20 degrees to each side through a vertical axis.</p> <p>The winch is arranged with padeyes for lifting sling and standard container corner fittings.</p>	
Surface treatment:	Sandblasting, metallizing, priming and top painting.	
Weight:	Appr. 3.000 kg	







1.6 Hydraulic power pack LPP 50 D

Manufacturer:

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Year of purchase: 2006

The LPP 50 D power pack is powered by a Deutz 50 kW diesel engine and serves as a multipurpose power pack designed for the flexible operation of many types of hydraulically operated oil spill clean-up equipment. Equipped with 3 hydraulic circuits the Lamor LPP 50 D can be used to power multiply users such as a skimmer and boom winder consecutively.

LPP 50 D is containerised within a steel frame designed to ensure a good circulation for the air cooled diesel engine. The power pack is equipped with electric start and incorporates control panel and hydraulic oil cooler into the framework. The LPP 50 D Power Pack utilizes a Sauer-Danfoss proportional hydraulic valve system making it possible to easily adjust the flow of oil to the supplied components. The flow will always remain set even when the pressure varies according to consumption. The power pack is equipped 4 point lifting rings and forklift channels making it easy to handle on land or offshore. For safety the hydraulic pump is equipped with an automatic shut-down system, also the LPP 50 D can be equipped with a spark arrestor or Chalwyn safety shut-down valve.



Fig. 9 Hydraulic power pack LPP 50 D

Table 3 Technical Specifications - hydraulic power pack LPP 50 D

Length	1345 mm
Width	810 mm
Height	1100 mm
Weight	600 kg
Hy circuits	3 pcs
Hydraulic flow	106 l/min
Hydraulic pressure	180 bar
Power	50 kW
Oil tank capacity	70 l
Fuel tank capacity	25 l

1.7. Spares for the power pack LPP 50 D

The Lamor spare parts kit for LPP 50 D includes items necessary for field repair and maintenance.

1.8 Hydraulic hoses

Sets of hydraulic hoses for the Power Pack LPP 50 D: set for the power-pack boom compressor and set for the power-pack boom reel.

1.9 Hydraulic compressor HKL 4100/8-113

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Website: www.dynaset.com

Year of purchase: 2006

The hydraulic compressor HKL 4100/8-113 is a hydraulically driven compressor that transforms the hydraulic power into a quality air pressure and which also can be easily connected to any working tool and the hydraulic line thereof.

The hydraulic compressors of HK-range are completed with piston block. HKL-unit comprises frame integrated pressure reservoir, relief and safety valves, pressure gauge as well as automatic rotation speed control valve.

The units are provided with cooled lubrication system, oil separator and relief valve on the air intake.



Fig. 10 Hydraulic compressor HKL/8-113

Table 4. Technical Specifications - hydraulic compressor HKL 4100/8-113

Type	Lamella compressor
Length	870 mm
Width	495 mm
Height	770 mm
Weight	185 kg
Capacity	4100 l/min
Pressure	8 bar
Hydraulic flow	113 l/min
Hydraulic pressure	210 bar nominal
Hydraulic pressure	180 bar minimum
Hydraulic pressure	250 bar maximum
Air flow	4100 l/min at 8 bar
Weight	Approx. 185 kg