EMSA/CPNEG/17/2016 Stand-by Oil Spill Recovery Vessels Information Meeting

Mrs Helena Ramon Jarraud / Deputy Head of Unit Mr Veselin Vasilev / Senior Project Officer Pollution Response Services Unit







Provision of information regarding the Negotiated Procedure EMSA/CPNEG/17/2016:

- EMSA's At-sea Oil Spill Recovery Service
- Scope of procurement
- Contract Structure
- How to apply
- Questions and Answers



Time	Agenda Item	Speaker
10:30 - 10:40	Registration	-
10:40 - 10:50	Welcome by Hosts	Hosts
10:50 – <mark>1</mark> 1:10	Introduction to EMSA's at sea oil spill recovery services The European Maritime Safety Agency Framework of the oil spill response vessels service Current configuration of the network Technical challenges & solutions	EMSA
11:10 - 11:20	Questions and Answers Open Session for participants	All
11:20 - 11:30	Break	
11:30 – <mark>1</mark> 1:50	Scope of procurement EMSA/CPNEG/17/2016 Geographical areas Contract structure How to Apply Requirements Evaluation criteria Timetable	EMSA
11:50 - 12:00	Questions and Answers Open Session for participants	All
12:00	Closing of the meeting	Hosts



Introduction to EMSA's At-sea Oil Recovery Service

Background

Establishment and tasks

- Post Erika (2002: EMSA established)
- Post Prestige (2004: new task Marine Pollution Preparedness & Response)

Decentralised Agency of the European Union

- Own legal identity
- No legislative role
- Technical and operational support
- 200+ employees
- 54.2 mEUR annual budget (2015)

Legal basis

Regulation 1406/2002 as amended (2013 – a new task related to offshore installations' spills)



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Fields of competence





Maritime safety

Prevention of pollution caused by ships





Maritime security



EMSA's objectives

Response to pollution caused by ships





Response to pollution caused by oil and gas installations

EMSA's pollution response services

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- Network of Stand-by Oil Spill Response Vessels – mechanical recovery and dispersant spraying capabilities
- Equipment Assistance Service (EAS) equipment to be used by vessels of opportunity
- CleanSeaNet and Illegal discharges
- HNS Operational Support: MAR-ICE Network
- Experts: On-site/Office-based







- "Top-up" Member States pollution response capabilities
- "European Tier" of resources
- Mobilisation by EMSA at request of MS/EFTA/CC/Third country sharing a regional basin or Commission (or Third Party under certain conditions)
- Channelled through "EU Community Mechanism"
- Emergency Response Coordination Centre (ERCC) managed by DG ECHO
- Under "operational control" of the affected coastal State

Main Objective: Stand-by At-sea Oil Recovery Service

Contractor must ensure that:

- Vessel undertakes normal commercial activities; and
- At request, the vessel is transformed & mobilised at short notice for at-sea oil recovery services in accordance with Operations Manual (to be approved by Class)



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Simplified mobilisation procedure

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Type of Vessels



Tankers



Offshore supply vessels



Type of Equipment









Sweeping arms





Combined systems





- Large storage capacity (EMSA largest is 7,458m³)
- Prepared to deal with oil (heating, filling, discharging)
- Flexibility for decanting
- Flashpoint
- Unrestricted sea-going service



Tankers - Disadvantages

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- Space on deck
- Speed
- Low speed
- Manoeuvrability
- Crew number
- Accommodation



Offshore Supply Vessels - Advantages

- Deck Space
- Equipment Deployment
- Less pre-fitting for installing equipment
- Manoeuvrability and Low Speed
- Speed
- Visibility
- Accommodation for EMSA and liaison officer



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- Storage capacity limited to 1,000 1,500m3
- Bad weather swell washes the aft with oil (slippery)
- Good weather dirty equipment oil spreads quickly
- Flashpoint
- Significant pre-fitting (e.g. piping and heating)



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Setting-up the Service



Preparatory Phase

- Purchase/transfer/servicng of oil spill response equipment
- Pre-fitting the vessel for equipment installation
- Crew Training

Stand-by Phase

- Vessel available and ready to respond within mobilisation time (max. 24h.)
- Equipment maintenance
- Drills and Exercises

Preparatory Phase: Challenges

- Pre-fitting, conversion works
- Purchase/transfer/servicing and installation of OPR equipment
- Mobilisation Plan, Operational Procedures
- Crew Training
- Certification by Classification Society (Class Notation as "Occasional oil recovery vessel60°C")
- Acceptance Test









Quarterly drills: 4 times a year

Scope:

- To verify the level of readiness of vessels, crew and OSR equipment
- To train crew in oil pollution response: equipment operation with other units at sea



Stand-by Phase: Exercises

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Type:

- Notification only
- Operational (max. 10 days/year)

Scope:

- Integration of EMSA vessels in EU Member States Command and Control Structures
- Co-operation with participating Units
- Internal and External level of Coordination





Scope of procurement

Geographical areas/lots

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Lot 1: Southern Black Sea



Southern Black Sea:

Limited by the coastline of Bulgaria and the Turkish coastline in the Black Sea limited by the 32° meridian east and 43°45' parallel north.



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Lot 1: Equipment solution

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Set of equipment transferred

Purchase



- 2 x Sweeping arm
- Offshore skimmer
- Weir boom
- Slick detection system
- Containerised boiler
- Additional small equipment (gas detector, minilab, flash point tester, cleaning machines, VHFs)
- The transferred equipment will need to be serviced



Additional small equipment

- Flow meter
- Interface detection system
- Equipment logo
- Upgrade slick detection system

Lot 2: Northern Baltic Sea



Northern Baltic Sea:

Covering the area from the line Liepāja (Latvia) and Kalmar (Sweden) to the North.



Note: Subject to approval by the EMSA Administrative Board

Lot 2: Equipment solution

EMSA

Set of equipment transferred from the previous contractor



- 2 x Sweeping arm
- Boom system
- Offshore skimmer and Arctic skimmer
- Slick detection system
- Additional small equipment (gas detector, minilab, flash point tester, VHFs)

The transferred equipment will need to be serviced/overhauled

Purchase



- Power pack
- Flow meter
- Interface detection system
- Cleaning machines
- Equipment logo
- Upgrade slick detection system

Min. requirements regarding the arrangement and the vessel (Phase II)



- Vessel should not be engaged with to provide pollution response services at the time of award;
- The shipowner/operator must be part of the company/consortia submitting the tender;
- The minimum vessel net storage capacity for recovered oil must be:

For Lot 1 – Southern Black Sea - 1,250 m³

For Lot 2 – Northern Baltic Sea - $1,500 \text{ m}^3$

- Vessel must be available for mobilisation at short notice;
- Vessel should be self-propelled;
- Vessel should not be subject to the single hull phase-out requirements;
- Vessel should be registered on either an EU Member State or a contracting party to European Free Trade Area (EFTA) or a non-EU white listed register as defined by the Paris MoU;
- Vessel(s) must be classified by an EU recognised organization;
- Vessel must be classed for unrestricted sea-going service and have all the certificates required for international voyages without any limitation. For Lot 2 Northern Baltic Sea the vessel must have at least Ice Class 1 or equivalent;
- In case the vessel is not built it must be under construction by 15th September and finalised before the end of the Preparation Phase (June 2017);
- Vessel's should have a valid Safety Management Certificate (SMC);
- The contact person of the company/consortium and the responsible crew on the vessel(s) must have a good command of the English language.



Contract structure

Dual Contract Structure









Vessel Availability Contract (VAC)

Between EMSA and the Contractor

• 4 Years + Renewable once = Maximum 8 years total

It secures:

- **Requirements** for vessel(s), equipment and crew
- Stand-by / availability
- Drills and participation in exercises
- Mobilisation time
- Mandatory use of the Incident Response Contract





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Incident Response Contract (IRC)











Pre-fixed contract with pre-set conditions & tariffs:

- Between the requesting coastal State and contractor
- Avoid unnecessary high tariffs vs. vessel of opportunity ۲
- 1 Model Contract for 25+ different legal systems

Clear allocation of responsibilities during operation

- Under operational command of the MS (SOSC)
- National officer on board
- Safety responsibility: Master (final)

Period

21 Days: "window of opportunity"/economic commitments of operator

Renewal possible under same conditions

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Preparatory Phase - Pre-financing available from EMSA

- 1) Oil Spill Response Equipment
 - Purchasing Pre-financing up to 100%
- 2) <u>Pre-fitting Vessel</u> (e.g. for equipment installation)
 - Pre-financing up to 80%
 - Remaining 20% paid when vessel is accepted by EMSA

Stand-by phase

3) Vessel Availability Fee (covers drills; crew training; storage, maintenance and insurance of equipment)

Additional Payments

- 4) At-sea Exercises: Daily rate + Fuel
- Pollution Response Incident by Member State: Daily rates (operational and stand-by) + Fuel + Cleaning

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Lot	Maximum Availability Fee (initial Stand- by period) (EUR)	Maximum Equipment Price (EUR)	Maximum Pre-fitting Price (EUR)	Maximum overall budget (EUR)
1. Southern Black Sea	2,200,000	200,000	600,000	2,800,000
2. Northern Baltic Sea	2,400,000	250,000	600,000	3,050,000

Notes:

1. The difference in the ceilings between the lots is explained by different specific requirements per lot in terms of equipment and/or vessel.

2. The contract for Lot 2 will only be awarded on the condition that EMSA Administrative Board approves the service for the Baltic Sea. If granted, the contract will be awarded either in 2016 or 2017 subject to the availability of necessary budgetary resources



How to Apply





- 1. Procurement Procedure
- 2. Procurement Timetable
- 3. Submitting "Applications"





2 Phase Approach:

Phase I - "Invitation to Apply"

Phase II – (Restricted) "Invitation to Tender"



Publication of Invitation to Apply in the OJEU on 14 May (Open to any Interested Party)



Submission of Applications: Deadline 22 June



Evaluation of Applications as per Enclosure A.1: Criteria



Determination of Pre-Selected Candidates





Award of Contracts

Provisional Timetable Application Phase



PROCUREMENT PHASE 1: Invitation to Apply				
" Contract Notice " publication in OJEU	Documents available on www.emsa.europa.eu	14 May		
"Application" Preparation	Interested Parties prepare "light" documentation	May - June		
Information Meeting	Procurement Procedure and Technical Elements Bulgaria	1 June		
"Application" Deadline	"light" documentation submission	22 June		
"Application" Evaluation	Identification of "Pre-selected Candidates" by EMSA	June - July		



www.emsa.europa.eu

"Working with us" -> Procurement -> "Calls for Tenders"



Procurement documents

EMSA

EMSA			E	uropean Maritime Safety Agenc	
MPLEMENTATION TASKS / OPERATI	ONAL TASKS / EVE	NTS / NEWS & MED	IA / PUBLICATIONS	Search	
ROCUREMENT MENU	EMSA/CPNEG	/17/2016			
Procurement Main Page Ongoing calls for tender	Published Deadline	14.05.2016 22.06.2016			
Period 2011 - Today Period 2006-2010	Service Contrac	cts for Stand-by Oil	Spill Recovery Vessels		
Awarded contracts	The Agency provides additional response capacity to that of the pollution response mechanisms of EU Member States through contractual arrangements with private or public companies/consortia. Such companies/consortia can be drawn from any relevant industry including shipowners/operators and the spill response service providers.				
OCUMENTS FOR TENDERER	The contracted mobilised at sh	vessels would unde ort notice for at-sea	rtake normal commercial acti oil recovery services during a	vities and, at request, be transformed and a (major) oil spill.	
Financial Form Legal Entity Form	This procurement procedure for stand-by oil spill recovery vessels will cover the following geographical areas:				
Statement of ubcontracting / Joint Offer	1. Southern Black Sea; 2. Northern Baltic Sea.				
Low-value procurement	More details about this procurement procedure can be found in documents that can be downloaded in the zip file below.				
rocedure Tendering Conditions applicable only if Invitation to render refers to them)	An information Meeting, open to any interested party to attend, will be organised in June (see the details in the table below). Prior registration is not needed. Nevertheless, it would be appreciated for logistic purposes to receive an e-mail (<u>CPNEG172016@emsa.europa.eu</u>) indicating the participation in the meeting.				
MPORTANT INFORMATION					
	Country C	ity Date	Location	Agenda & presentations	
Guidelines for Tenderers. ead before submitting your ds. Remedies	Bulgaria Va	arna 01.06.2016 10:30	Maritime Administration 5, Primorski Blvd, 9000	(see below)	
	The relevant C	antract Notice for thi	a procedure (2016/C 002 160	(540) as published in the Official Journal	
ROCUREMENT NEWSLETTER	of the European uri=TED:NOTIO	n Union can be found CE:165640-2016:TE	d in the following link: <u>http://</u> XT:EN:HTML	ted.europa.eu/udl?	
you are interested in sceiving information about alls for tenders launched by MSA, please fill the form:	EMSA CPNE Agenda Var	EG172016.zip rna.pdf			
Name or Company	Updated	14.05.2016			
E-mail					
SUBSCRIBE					

Zip file documents

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Phase I - Application

- CPNEG172016 Invit to Apply_221874.pdf
- 🟃 CPNEG172016 Encl A.1 App Specs.pdf
- 岸 CPNEG172016 Encl A.2 Checklist.pdf
- 🟌 CPNEG172016 Encl A.3 LEF.pdf
- CPNEG172016 Encl A.4 BAF.pdf
- 📩 CPNEG172016 Encl A.5 Declaration Honour.pdf
- CPNEG172016 Encl A.6 Subcontracting form.pdf

Phase II - Tender

- TPNEG172016 Encl T.1 Tender Specs.pdf
- 👫 CPNEG172016 Encl T.2 VAC.pdf
- 🟃 CPNEG172016 Encl T.2 Annex III IRC-V.pdf
- 뒀 CPNEG172016 Encl T.2 Annex IV Tec Specs Vessel.pdf
- 📜 CPNEG172016 Encl T.2 Annex IV_Appendix lot 1 boiler.pdf
- CPNEG172016 Encl T.2 Annex IX Financial Guarantee Template.doc
- 坑 CPNEG172016 Encl T.2 Annex V Equipment Lot 1.pdf
- 📜 CPNEG172016 Encl T.2 Annex V Equipment Lot 2.pdf
- CPNEG172016 Encl T.2 Annex VI Mobilisation Procedures.pdf
- CPNEG172016 Encl T.2 Annex VII Tec Specs for the Crew.pdf
- CPNEG172016 Encl T.2 Annex VIII Guidelines for Drills Exercises.pdf
- CPNEG172016 Encl T.2 Annex X Bank details.docx
- CPNEG172016 Encl T.3 Pre-financing guidelines.pdf
- CPNEG172016 Encl T.4 Bid Template Lot 1 Black Sea.doc
- CPNEG172016 Encl T.4 Bid Template Lot 2 Baltic.doc
- CPNEG172016 Encl T.4_Appendix.xls



Cover letter: deadline for submission of original papers + electronic copy

Enclosures:

- 1: Application Specifications: main requirements;
- 2: Check-List: review it before sending application;
- 3: Legal Entity Form (LEF);
- 4: Financial Entity Form (BAF);
- 5: Declaration of Honour;
- 6: Template for "Statement of Subcontracting/Joint Offer".

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Formal requirements



- Deadline 22 June 2016
- Two sealed envelopes (one inside the other)
- One submission per lot, i.e., different lot → different envelope
- Submission of 1 original paper copy of the application + electronic copy to <u>CPNEG172016@emsa.europa.eu</u> or on USB or CD
- Justification for non-inclusion of requested documentation
- Applications can be in any official language of the EU (preferably in English)
- Point 10.6: General Description of Proposed Arrangement: must include copy in English
- Separation of documentation into <u>Parts A E</u> (as per the Checklist)



a) Exclusion Criteria – Satisfactory / Non-satisfactory

b) Selection Criteria - Satisfactory / Non-satisfactory

NON-COMPLIANCE WITH 1 EXCLUSION OR SELECTION CRITERION – GROUND FOR NON - ADMISSION

a) Exclusion criteria (points 10.2 - 10.3 of Application Specifications)





> Additional evidences to be provided during Phase II

b) Selection criteria (point 10.4 of Application Specifications)

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Economic and Financial Capacity

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Balance sheets for the last
 3 years

FOR PRIVATE ENTITY: Statement of overall turnover and profit and loss account for the last 3 financial years

FOR PUBLIC ENTITY: annual budget of the last year

b) Selection criteria (point 10.5 of Application Specifications)



Technical and professional capacity of the Company/Consortium Document of Compliance (DoC) for International Safety Management (ISM) Code including the related latest external audit report Grouping: at least 1 member must have a valid DOC

Overview of company/consortium Port State Control record (PSC inspections and detentions) or annual Flag Surveys for last 3 years – 3 detentions will be ground for exclusion

Where applicable, additional list of relevant services for last 5 years Grouping: criteria evaluated as a group, not individually



Evaluation Result

Application meeting exclusion and selection criteria?

Yes → "Pre-selected Candidate" → Invitation to Tender (expected end of July)

No → "End of Participation"

Checklist

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ENCLOSURE A.2 - APPLICANT'S CHECKLIST

Enclosed to Procurement Procedure No. EMSA/CPNEG/17/2016 concerning Service Contracts for stand-by oil spill recovery vessels

Competitive procedure with negotiations

Phase I - Invitation to Apply

Document	Check
Application submitted by 22 June 2016 at the latest	
Ref. EMSA documentation: Invitation to Apply, points 2.b & 3	
Application inserted in 2 envelopes, one inside the other. Both envelopes must be sealed.	
If self-sealed envelopes are used, each envelope must be closed by an adhesive tape with sender's signature across	
Ref. EMSA documentation: Invitation to Apply, point 4	
Both envelopes labelled according requirements	п
Ref. EMSA documentation: Invitation to Apply, point 4	
Electronic copy (PDF) of the application sent to <u>CPNEG172016@emsa.europa.eu</u> by 22 June 2016	
and/or	
Included in the application in a CD or USB key	- 11
Ref. EMSA documentation: Invitation to Apply, point 5	
Application must include a copy in English of the documents/information requested under point 10.6 General description of the proposed arrangement.	
Ref. EMSA documentation: Application Specifications, point 9	
Application structured in line with EMSA requirements - Parts A, B, C, D and E	
Ref. EMSA documentation: Application Specifications, point 9	
PART A	
1. Signed cover letter clearly indicating:	
For individual company:	
- the company applying	
- the person heading the project	
For subcontractors and groupings:	
 the subcontractors and companies forming the grouping (including roles, qualifications and experience of each company) 	
- the company and person heading the project	

Document	Check
(Ref. EMSA documentation: Application Specifications, point 9)	
PART A	
2. Statement of Subcontracting/Joint Offer (template - Enclosure A.6 to the Invitation to Apply)	
In case of Joint Offer or Subcontracting, please fill the document "Statement of Subcontracting/Joint Offer"	
Ref. EMSA documentation: Application Specifications, points 7, 8 and 9	
PART A	
3. Original of the authorising document	
For individual company:	
Original of the document authorising the person heading the project to submit an offer and, in case of award, to sign the contract on behalf of the company	
For groupings:	
Original of the document authorising the company and person heading the project to submit an offer and, in case of award, to sign the contract on behalf of the grouping	
Ref. EMSA documentation: Application Specifications, point 9	
PART A	
4. Legal Entity Form (template - Enclosure A.3 to Invitation to Apply)	
Applicants are exempt from submitting the Legal Entity Form requested and attachments if such a form has already been completed and sent either to EMSA or any EU Institution previously unless changes have occurred in the meantime.	
In case of grouping, each company must submit this document	
Ref. EMSA documentation: Application Specifications, point 10.1	
Supporting documents:	
- copies of company VAT number registration certificates and, if applicable	
- a copy of an Official Document (Official Gazette, Company Register, etc.)	
PART A	
 Financial Identification Form (template - Enclosure A.4 to Invitation to Apply) for the Company leading and submitting the Application 	
This document filled and signed by the account holder and the bank (or accompanied by a recent bank statement.	
Ref. EMSA documentation: Application Specifications, point 9	
PART B	
6. Declaration on Honour (template - Enclosure A.5 to Invitation to Apply)	
Each candidate, each subcontractor essential to fulfil the selection criteria, and each company part of	



PROCUREMENT PHASE 2: Invitation to Tender				
"Invitation to Tender"	"Invitation to Tender" sent "Pre-selected Candidates"	28 July		
Visit to EMSA stockpile	Opportunity to review equipment for transfer	16 - 19 August		
Clarification meetings	Clarification with candidates	22 - 26 August		
"Tender" Deadline	"Heavier" documentation submission	7 September		



PROCUREMENT PHASE 2: Negotiation				
Negotiation Stage	Improvements to offers	September/ October		
On-site Meetings	Visits to vessels	October		
"Final Tender" Deadline	Final offers	4 November		
Final Tender Evaluation	Awarding of contracts	December/ January		

To be prepared for the Phase II - Tender

- Technical Specifications of the vessel
- Pollution Response Equipment
- Mobilisation Plan
- Training Programme
- Financial Offer

Will be evaluated in the Tender Phase Against minimum requirements and award criteria





Useful information

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EMSA Handbook 2014

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EUROPEAN MARITIME SAFETY AGENCY

QUALITY SHIPPING, SAFER SEAS, CLEANER OCEANS

Vigo

ATLANTIC

NETWORK OF STAND-BY OIL SPILL RESPONSE VESSELS - INFO SHEET

EQUIPMENT STOCKPILE

Vikoma weir boom 180

Desmi weir skimmer (Terminator)

Seadarg oil slick detection system

Sweeping arms

Boom

Skimmer

(Transrec 150)

Slick detection

CONTRACTOR Remolcanosa S.A. CONTRACTED VESSEL(5) Ria de Vigo AREA OF ECONOMIC OPERATION Spain, North-western Coast (Galicia) STOCKPILE LOCATION Vigo, Spain NUMBER OF VESSELS TO BE MOBILISED

MOBILISATION TIME Within 24 hours

ABOUT THE SERVICE

The Contractor, Remolcanosa, is a marine services company based in Vigo and has worldwide operational capacity. The main activities include harbour towage, salvage, offshore and coastal towage, crew and vessels management and ISM and ISPS Codes Consulting.

The arrangement includes the supply vessel Ria de Vigo, which is based in Vigo providing Fisheries Monitoring Services.



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The Rio de Vigo's commercial activity is fisheries control.

Sweeping arms

ABOUT THE VESSEL - Ria de Vigo



r Heavy duty boom



Two Sofreba rigid sweeping arms (13 m) with weir skimme

Desmi heavy duty boom, 2x250 m (Ro-Boom 2000)

Framo weir/shovel drum high-capacity multiskimmer

ES

IMO number: 8311417 Flag state: Spain Port of registry: Santa Cruz de Tenerife Type: Supply Vessel Built: 1985 Length: 69.00 m Breadth: 13.50 m Max draft: 6.80 m Gross Tonnage: 1585 Ton Storage capacity: 1522 m³ Heating capacity: 750 kW Pumping capacity: 625 m³/h Flash Point: >60° Propeller: 2 x Controllable Pitch Propeller Bow Thruster: Yes Max. speed: 14.25 knots Classification Society: Germanischer Lloyd



EUROPEAN MARITIME SAFETY AGENCY

QUALITY SHIPPING, SAFER SEAS, CLEANER OCEANS

Sines

ATLANTIC

NETWORK OF STAND-BY OIL SPILL RESPONSE VESSELS - INFO SHEET

CONTRACTOR Mureloil CONTRACTED VESSEL(S) Bahia Tres

AREA OF ECONOMIC OPERATION Western coast of Portugal, mainly between Sines and Lisbo STOCKPILE LOCATION Sines, Portugal NUMBER OF VESSELS TO BE MOBILISED 1

MOBILISATION TIM Within 22 hours

ABOUT THE SERVICE

The contractor providing the ship is Mureloil, result of a Joint Venture between Naviera Murueta and Naviera Elcano, both of them Spanish shipowners.

The vessel Bahia Tres provides bunkering services along the Portuguese coast. The equipment stockpile is located inSines.

The Bahia Tres' commercial activity is bunkering services.



skimmer module (LJS 12) Boom Norlense single point inflation boom, 2x250 m (NO-800-R) Skimmer Lamor offshore brush skimmer (LFF 100 2C)

Slick detection Seadarg oil slick detection system









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ES

Sweeping arm E

Boom and brush skimmer

Norlense boom

Sweeping arm skimm





FOR MORE INFORMATION: www.emsa.europa.eu

EMSA Handbook 2014

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EMSA BOOM SYSTEM

EMSA OIL SPILL RESPONSE EQUIPMENT

DESMI RO-BOOM 2000

Remark: The Information Is based on the manufacturer's documentation

BOOM WINDER

and standard profiles.

The Ro-boom is delivered on a 10 ft flat rack winder. The winder frame is used for storage, transportation and handling of the Rohoom

The winder frame is manufactured from specially designed steel Two frames with bearing housings for a shaft are mounted on the bottom frame. On the shaft a drum with end flanges is mounted. On one end of the shaft a sprocket wheel is mounted between the drum and the bearing housing. To rotate the drum a gearbox, with hydraulic motor, is mounted on a bracket plate on the bottom frame, the side of the bearing frame.

AIR BLOWER

occur.

The remote control stand with built-in air-blower is a movable unit designed for inflation/deflation of oil booms and operation of boom winders in areas where hazardous atmospheres may occasionally The remote control stand is connected to the power supply by means of a 10 metres hose set. It should be placed in such a way that the best possible control of the operation is obtained.

POWER PACK

The Ro-clean Desmi power pack, type DSPP 58 kW is a power unit, designed to operate in areas where hazardous atmospheres may occasionally occur. It is fitted with the necessary safety equipment to meet the safety standard Lloyd's Open Deck explosion proof Zone 2 areas and it is designed with ease of operation and maintenance in mind.

TECHNICAL SPECIFICATIONS :

Length:	2015 mm
Width:	1115 mm
Height:	1800 mm
Weight:	1500 kg
Max. pressure:	210 bar
Flow range:	0-200 l/min

Name	Winder	Air Blower	Power pack	Flash point* Ex Class
Santa Maria(2x250 m)	Ro-boom winder	HRD2	Desmi DSPP 58, 58 kW	Zone 2
Aegis I (2x250 m)	Ro-boom winder	HRD2 (Integrated In the power pack)	Desmi DSPP 58, 58 kW	Zone 2
Ria de Vigo (2x250 m)	Ro-boom winder	HRD2	Hydraulic power provided by the vessel	N.A.

* Depending on the location of the equipment on board, the vessel may be classified with a flashpoint above or below 60°C.





EUROPEAN MARITIME SAFETY AGENCY QUALITY SHIPPING, SAFER SEAS, CLEANER OCEANS

BOOM SYSTEM

EMSA OIL SPILL RESPONSE EQUIPMENT

LAMOR HDB 2000 HEAVY DUTY BOOM

the Asia

Remark: The Information is based on the manufacturer's documentation

GENERAL DESCRIPTION

The Lamor heavy duty boom is a segmented boom constructed in such a way that two layers of synthetic fabric are vulcanized together with synthetic oil-resistant rubber outer layers. The boom is equipped with a ballast chain that guarantees correct deployment in sweeping operations.

The boom has ASTM connectors and towing lines. On deployment the boom sits symmetrically in the water, allowing for easy maneuver and for facing the oil slick from either side. Inflation of the boom is guick and efficient thanks to the air valve and the use of an air blower.



The boom is equipped with inflatable buoyancy chambers with separate air valves, which means that in case of puncture only one chamber will lose air. It is manufactured from heavy-duty neoprene rubber with a hypalon external skin.

This one-piece moulded composite construction has complete cross vulcanization of rubber and reinforcing plastics. The construction is seamless, it has high abrasion resistance, peel resistance and tensile strength.

The boom is also fitted with stainless steel fittings, galvanised ballast/tension chains and internal stainless steel rods. These rods ensure optimum skirt profile under tow.

KEY CHARACTERISTICS:

- Segmented heavy duty boom, 250 metres each
- Inflatable buoyancy chambers
- ASTM connectors
- · Belt-driven air blower
- · Storage reels mounted on 10' flat rack containers



TECHNICAL SPECIFICATIONS				
Freeboard	600 mm	Operational temperature	-40°C to 60°C	
Draught	1100 mm	Efficient in waves	up to 4 m	
Length (chamber)	3 m	Stable in current	up to 3 knots	
Length (section)	50 m	Deployment time	250 m – approx. 45 minutes	
Weight per meter	19.6 kg	Buoyancy /weight ratio	12.5:1	





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