

The European Union's Tacis Traceca Programme
For Azerbaijan, Kazakhstan and Turkmenistan

Supervision and Training of Navigation Aid
Equipments – Azerbaijan, Kazakhstan and
Turkmenistan

Partner Countries: Azerbaijan, Kazakhstan, Turkmenistan

Progress Report
December 2004



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The European Union*



*This project is implemented by
HPTI Hamburg Port Training Institute GmbH*



Form 1.2. Report Cover Page

Project Title	Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan			
Project Number	EUROPEAID/112971/C/SV/Multi			
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Date of Report: December 2004
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1 Project Synopsis

Project Title:	Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan
Project Number:	EUROPEAID/112971/C/SV/Multi Contract No: 30552
Countries:	Azerbaijan, Kazakhstan and Turkmenistan
Project Starting Date:	29 January 2003
Project Duration	31 months (from the effective date of contract)

Wider Objectives

Technical supervision and appropriate training measures for the project "Supply of Aids to navigation Equipment to the Ports of Aktau (Kazakhstan), Baku (Azerbaijan) and Turkmenbashi (Turkmenistan)" and TA to the Port of Aktau for procurement of a tug boat are carried out

Specific Project Objectives

Supervision

The timely supply of Aids to Navigation and nautical equipment in compliance with the respective technical specifications and contracts is ensured.

The co-ordinated technical and operational execution of the contracts is ensured

Training

Supply + installation of AtoN and equipment is supported by execution of appropriate training measures

Procurement of Tug Boats

Port of Aktau is supported in tendering procedures

The timely supply of Tug Boats under the frame of a procurement contract in compliance with the respective technical specifications and contracts is ensured

Planned Outputs

Results – Technical Supervision

1. Assistance to the suppliers and Beneficiaries in structuring the project is given
2. Time schedules are monitored
3. All pre-delivery, take-over, periodic and end-of-warranty inspections are carried out
4. Certificates according to contract stipulations are issued
5. Project performance is monitored
6. Compliance with quality requirements are ensured
7. All necessary reports are prepared

Training

1. Profiles for participants are elaborated and suitable candidates for training are identified
2. Training interventions on location and in Europe are conceptualised and conducted
3. Training interventions are assessed
4. All arrangements associated with training in Europe are managed

Tug Boat assistance

1. Technical specifications are identified
2. Assistance in the tendering process is given to the Port of Aktau
3. Inspections of Tug Boats are carried out

Project Activities

Project Execution + Supervision

- 1 Set-up an overall project schedule
- 2 Ensure the execution of the preparatory works of the Beneficiaries before delivery of equipment
- 3 Monitor time schedules and check milestones



- 4 Arrange problem solving meetings between suppliers, Beneficiaries and other parties involved
- 5 Monitor suppliers' compliance with contract obligations and technical specifications
- 6 Co-ordinate all activities with the EU, the suppliers and the Beneficiaries and assist the task manager
- 7 Monitor project performance progress and compliance with time schedules
- 8 Carry out all pre-delivery, take-over, periodic and end-of-warranty inspections
- 9 Issue certificates of pre-shipment inspections, certificates of preliminary acceptance, certificates of final acceptance
- 10 Monitor the environmental impact of the project and the compliance with European standards

Expert Assistance to Beneficiaries

1. Assist in installing and using of new aids to navigation equipment
2. Assist in determining the right place for installation of the equipment
3. Ensure the validity of warranty demands by advising in properly installing the aids to navigation equipment
4. Assist in checking the installation and functionality of the equipment
5. Obtain additional information from suppliers in case of necessity
6. Advise on the proper use of radar and ARPA
7. Provide training on location for the personnel handling the radar and ARPA
8. Advise on correct application of relevant international rules and regulations
9. Assist in elaboration of maintenance schedules for the new equipment

Financial Documents

1. Collect all documents required by the Tacis Contract Procedures according to the payment schedules
2. Compile payment dossiers with these documents
3. Send the payment dossiers to EC in due time

Reporting

1. Report to EC on pre-shipment inspections, handing-over and final acceptance inspections
2. Prepare two-monthly reports on project execution and a final report
3. Prepare quarterly reports on project progress according to Tacis reporting requirements
4. Co-ordinate all activities with the EU, the suppliers and the Beneficiary and assist the task manager

Training

1. Develop profiles of participants of the training
2. Assist in identifying suitable candidates for training
3. Conceptualise and conduct training interventions on location and in Europe
4. Prepare and conduct assessments of training interventions and of participants' benefit from attending the training courses
5. Manage all travel and other arrangements associated with training in Europe

TA for procurement of Tug Boat

1. Carry out fact finding mission to Aktau to specify technical requirements in detail and discuss financial aspects and tender procedures
2. Advise the Port of Aktau in identifying technical specifications for the tug boat and elaborate tender documents in co-operation with the port
3. Assist the Port of Aktau in the tendering procedures and evaluate bids and prepare an evaluation report
4. Advise the port during negotiations with the supplier
5. Carry out construction supervision the tug boat
6. Assist the port during contract duration in developing maintenance and training plan of the crew

Project starting date: 29 January 2003

Project duration: 31 months



2 Summary of Project Progress since the Start

2.1 Relevant Project Context

The overall objective of the EU assistance in Tacis-Traceca projects is to promote the full use the corridor for multimodal transport and its interlinkage by supplying and improving multimodal cargo handling facilities and to improve transport safety of the corridor. The EU has decided to supply Aids to Navigation equipment and materials to the ports of Aktau, Baku and Turmenbashi and assist them in making the approaches to their ports safer for commercial shipping.

The specific objective of the project is the improvement of navigational safety and the facilitation of safe shipping the approaches of the three ports and the traffic area between them.

The objective of this project is to ensure the timely supply of Aids to Navigation and nautical equipment in compliance with the respective technical specifications and contracts as well as to carry out training measures for the proper use of the equipment. Further, advise in the procurement of a tug boat for the port of Aktau will be given within the project.

The supervisor co-ordinates the co-operation between the individual project partners in Azerbaijan, Kazakhstan and Turkmenistan, the suppliers and the task manager in Brussels.

2.2 Summary of Project Progress

2.2.1 Supervision

The objective of this task is to ensure adequate and timely supply of Aids to Navigation and other Nautical Equipment and Materials and to guarantee its compliance with the technical specifications and contractual obligations as set forth in the a.m. supply project and subsequent contracts signed between the European Commission and the successful bidders. A further objective is to ensure a co-ordinated technical and operational execution for the contracts.

During this reporting period the entire aids to navigation equipment which was delivered and installed last year was operated by the three ports. In October this year, the final acceptance of the equipment took place. For details, please see point 4.2 and 4.3 of this report. The Contract concerned in the final acceptance were:

Supply Contract for European Community External Aid N° 30551, Supplier: Transas Europe GmbH

The equipment was inspected, tested and accepted by the supervisor in the three ports in October this year.

Supply Contract for European Community External Aid N° 51247, Supplier: Pintsch Bamag Antriebs- und Verkehrstechnik GmbH

The equipment was inspected, tested and accepted by the supervisor in September this year.

2.2.2 Training

The objective of this task was to support by appropriate training measures the supply and installation of the Aids to Navigation and other Nautical Equipment and Materials delivered by the EC under the a.m. supply contracts. All tasks of this component of the project were executed during the last reporting period. For details please see Progress Report 1 of November 2003.



2.2.3 Technical Assistance for the Procurement of a Tug Boat

As explained in the two previous reports, the Port of Aktau does no longer intend to lease a tug boat, but to buy one. Therefore, the objective of this task as well as the activities were slightly changed.

The objective of this task is to support Aktau port in all aspects of the tendering procedures for the purchase of a tug boats, to ensure adequate and timely supply of the tug boats under the frame of a purchase contract and to guarantee the compliance with the technical specifications and the contractual obligations as set forth in the relevant contract.

During the specification and negotiation process the port management realised that they need support by an experienced construction supervisor especially during the construction period. Thus, they asked us if our engineer could provide the following additional services, which will improve the sustainability of the project:

- Checking of design plans before construction and discussion about specific details (e.g. type of engine with regard to local conditions in Aktau, specific construction features, facilitation of exchange of information between contractor and port)
- Periodical inspections during construction
- Commissioning
- Participation in operations testing

These services will be executed in the time between contract signature for the tugboat and the sailing to the Port of Aktau and are thus not included in the initial project tasks. The supervisor asked the task manager for an extension of the existing contract as the a.m. additional tasks exceed the time frame of the current contract as well as the planned input for the initially foreseen tasks. This extension was granted.

This project component now includes the following main activities:

Technical Specifications are identified

In spring 2003 the Consultant has elaborated full tender documents for the purchase of a tug-boat by the port of Aktau. The requirements of the tug boat were discussed with the experts from the port of Aktau and specifications elaborated according to the specific demands of the port. These specifications were submitted to the port of Aktau. Also, a Russian version of the specifications was given to the port.

Assistance in the tendering process is given to the Port of Aktau

The supervisors made a proposal for general and special tender conditions. The legal framework and contract documents for the tendering and purchase of the tug boat was elaborated and proposed to the port of Aktau. The port then adapted the proposed legal and contract documents to Kazakh law.

The tender was published in September 2003 in Kazakh newspapers and European suppliers have been directly addressed and asked to participate in the tender. The proposals were to be submitted in Russian and English languages. Unfortunately, the first tender had to be declared as invalid as two of the submitted three proposals had to be considered as non-compliant.

A second call for tender took place in the end of October 2003. Also this time, only one tender could be considered as compliant to all formal requirements. As a rule, state entities may only conclude contracts for purchases in case that at least two valid tenders have been received and evaluated. In order to speed up the process and avoid tendering the tug boat a third time, the port of Aktau applied to the Consultant with the request to technically evaluate this one compliant tender. The technical evaluation of the tender came to the result that the tender could be considered to be compliant with all technical requirements. Financially, the proposal appears to be within the budget foreseen for the purchase of the tug boat. The tender commission



of the seaport of Aktau therefore applied to the State Committee for State Purchases with the request to accept the conclusion of a contract the supplier even though only one valid proposal was available.

The State Committee for State Purchases finally agreed to go forward with contract negotiations with the bidder in the beginning of 2004.

A contract was drafted by the port of Aktau and the supervisor commented on this draft and gave recommendations. The contract between the ship yard and the port of Aktau became effective in the beginning of August 2004.

Assistance during the construction of the tug boat

The port of Aktau officially requested assistance in the supervision of the construction of the tug boat. After conclusion of the supply contract for the tug boat, the supervisor got into contact with the ship yard and requested the design drawings. The design drawings were carefully reviewed, clarifications requested and discussed with the ship yard.

In October the periodical inspections of the construction of the tug boat started. The supervisor inspected the shipyard which is located in Romania together with the supplier and will shortly go to Aktau in order to discuss final details with the port. If an extension to this contract is granted, it is planned to continue with the periodical inspections until June next year, when the commissioning of the tug boat will be starting.

Details of the construction supervision of the tug boat please find in Annex 3 of this report.



3 Summary of Project Planning for the Remainder of the Project

Supervision

With the issuing of the final acceptance certificates to the suppliers of contract 51247 and 50331, all activities of this project component are completed.

Training

All training activities were finalised in 2003.

Assistance with the purchase of a tug boat

As the current contract was extended until end of August 2005, the supervisor will carry out periodical construction supervision during the construction of the tug boat until June 2005, when the construction of the tug boat is planned to be completed. In July, the commissioning of the tug boat will start. The operations testing as well as the transporting of the tug boat to Aktau is planned to take place in August next year. The final testing and the hand over to the port of Aktau will take place in September next year.



4 Supervision of Delivery and Installation of the Aids to Navigation Equipment

4.1 Summary

4.1.1 Summary Supply Contract 51247

Except of the replaced LED lanterns for the port of Baku (see report below) all equipment supplied is operating well without major failures according to random spot checks by the supervisor and the statements of the operating Ports. Minor problems were solved by the supplier by replacement of components and installation of new software to everyone's satisfaction. It was emphasized by the Contractor that all replaced components or products are subject to companies product liability, beginning with the date of supply.



The old LED lanterns, which were exchanged by the supplier, could not be checked by the supervisor since most of the lanterns were already sent back to the Contractor, whereas a remaining of quantity 15 lanterns were –according to information received from the Port of Baku– stolen during preparation for transport. The supervisor could only check some of the buoys on position at sea in operation (see picture).

4.1.2 Summary of Supply Contract 50331

Generally, all equipment delivered under this contract was found to be in good working condition. The anemometers in Baku, Dubendi and Aktau had failures and were newly delivered in February 2004. For this equipment the warranty periods were extended.

Otherwise, the equipment was in good condition, although partly not yet used by the three ports.

4.2 Final Inspection of equipment delivered under EU supply contract 51247, Supplier Pintsch Bamag

4.2.1 Port of Baku

The delivered floating navigational equipment (35 buoys) was inspected and checked for completeness and function.

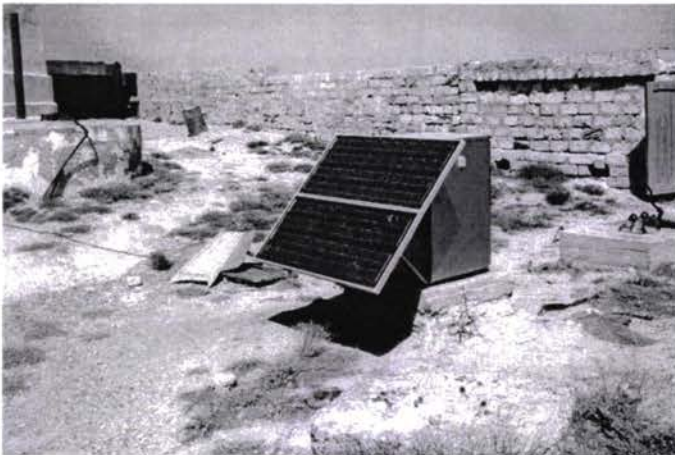


During the warranty period, the port of Baku had claimed that condensation was detected inside the LED lanterns, which interfered with their functionality and additionally led to corrosion of the batteries. The technical problems of the Port of Baku with the LED lanterns were not reported or confirmed by the two other Ports. However, the Contractor Pintsch Bamag supplied new charge regulators, one set of batteries and different flashers. Additionally, all 63 LED lanterns delivered to the port of Baku were replaced by the Contractor.

During discussions with the port it was then mentioned by the port staff, that some lanterns were hit by vessels during operation, too. It could not be clarified, if this was also a reason for the malfunctioning of the lanterns, as all old lanterns were already sent back to the Contractor.

It was further reported by the port, that the two rotating beacons were not operating properly, the lamps suddenly switched of and the rotating was not performed correctly.

An inspection of the rotating beacon showed, that the malfunction was not due to bad quality of the delivered equipment but rather due to insufficient power supply to the beacon. This insufficient power supply led to permanent change (reduction) of voltage and thus to the switching off of lanterns and irregular rotating of lenses. The organisation in charge of the installation will take care to change this situation and thus the failure will be remedied.



Installation of the power bloc on the ground with very long cable lengths to the lantern on the lighthouse top platform - too much cable losses and insufficient quantity of two solar modules.

Otherwise, neither the port nor the supervisor during his inspections had any other complaints concerning the functioning of the delivered equipment and the final acceptance certificate was signed in English and Russian by all parties. A copy of the Final Acceptance Certificate is attached as Annex 1.1 to this report.

4.2.2 Port of Aktau

The port stated its satisfaction with the equipment delivered by Pintsch Bamag and explained that all worked very well. The supervisor inspected the equipment in the port and came to the same conclusion. The equipment supplied for the port of Aktau was mostly spare parts for existing equipment as well as tools for repair of aids to navigation, therefore, most of it was stored in the port and not much used yet.

The final acceptance certificate was signed by all parties without any remarks and is attached as annex 1.2 to this report.



4.2.3 Port of Turkmenbashi

The port of Turkmenbashi expressed its satisfaction with the equipment delivered by Pintsch Bamag and explained that all equipment operates without problems. From 16 lightbuoys only 3 lanterns had minor problems whereby it was said during the discussion, that this was not a manufacturing default but the rather the result of hits by vessels.

The supervisor checked the equipment and came to the same conclusion. The contractor repaired of some LED lanterns by programming it with new software.

The final acceptance certificate was signed in English and Russian by all parties and is attached as Annex 1.3 to this report.

4.3 Final Inspection of equipment delivered under EU supply contract 30551, Supplier: Transas Europe GmbH

4.3.1 Port of Baku

4.3.1.1 Port of Baku and Dubendi – Acceptances

The delivered radio and radar equipment was inspected and tested by the supervisor during the final acceptance procedure.

All tested equipment was in good working condition.

The anemometers in Baku and Dubendi were some months ago sent back to the supplier, because they did not indicate the wind speed properly. New anemometers was delivered and installed during the final acceptance testing. They were in good working condition. The warranty period for the two anemometers was extended until 1 March 2005.

The power supply of one of the Radar/ARPA units was also exchanged during the warranty period. The warranty period for the power supply unit of one of the radars is extended until 12 January 2005.

The Final Acceptance Certificate was signed on 6 October 2004 by all parties. It is attached as Annex 2.1 of this report.

4.3.1.2 Port of Baku and Dubendi – General remarks

Unfortunately, the necessary registration for the Inmarsat C equipment as well as the MNSI number for the MF/HF equipment was at the time of final acceptance – October 2004 – still not available, neither in Baku nor in Dubendi. As an explanation, it was stated by the port, that the responsible authorities in Baku refused to give permission to use the MF/HF equipment, as for the time being the port is only in charge for the safety of the Bay, but not for a larger radius at the Caspian Sea. The registration for the Inmarsat C equipment apparently did not take place yet, because the port management does not see the necessity to pay the fees for use of the Inmarsat equipment.



Apparently, the department of the port in charge of vessel traffic control in the port and bay is interested in using the full set of equipment, but the port management is not interested in these issues at all. The port management is not prepared to take over safety and vessel control functions for an area exceeding the bay.

Further, it has to be pointed out, that the power supply in Baku is very unreliable and in the long run the power failures will have negative effects on the condition of the equipment. The port is aware of this fact and will try to remedy this situation. A new cable with more capacity is planned to be installed in October. However, it is incomprehensible, that it was apparently within one year time impossible to change the situation and only now first steps are planned (but not yet realised).

Also, the air conditioning in both locations, Baku as well as Dubendi, is entirely unsatisfactorily, although the port already before installation of the equipment promised to take care, that a reliable temperature control is available for the rooms where the equipment is installed.

A last point is that obviously the equipment installed in Dubendi is untouched since the tests carried out during the provisional acceptance. There is not even staff allocated for the work with the equipment. As a reason it was said that currently only very few vessels call the port of Dubendi, but in future, if the situations should change, of course the equipment would be used.

4.3.2 Port of Aktau

4.3.2.1 Port of Aktau – Acceptances

Due to damage of the originally delivered anemometer the instrument was replaced by the contractor on 07 February 2004. But on the date of Final Acceptance it was still under customs control in the Port of Aktau, waiting for clearance. After re-installation it will be commissioned by port technicians. The warranty period was extended until 01 August 2005.

Because the glass of covering box of the barograph was broken, the barograph was replaced on 07 February 2004, therefore the warranty period for the barograph was extended until 28 February 2005.

All the other delivered radio and radar equipment was inspected and tested and worked to the full satisfaction of the supervisor.

The Final Acceptance Certificate was signed by all parties on 8 October 2004. It is attached as Annex 2.2 to this report.

4.3.2.2 Port of Aktau – General Remarks

In Aktau the situation is remarkably different from the situation in Baku. The port and especially the department in charge of vessel traffic control and safety is keen on using the equipment and it is even planned to build up a whole vessel traffic control system for the whole Kazakh coast, installing the necessary equipment not only in Aktau, but also in Atyrau and Bautino.

The Inmarsat C equipment is not yet in use in Aktau, but the registration process is about to be finalised, and the contract with the company taking care of collecting the fees for use of Inmarsat prepared.

There are some problems with the use of the Radar/ARPA equipment. The port of Aktau applied for the permission to use the radar, but this permission is so far refused as the Ministry of Defence of Kazakhstan



refuses to permit the port the use of the radar frequency. Since the installation of the radar, the port tries to get the permission; various letters with explanations have been exchanged. The consultant was shown the correspondence between the Ministry of Defence and the port. The port argued that vessels use radar on the same frequency and that there is an international agreement on the use of a certain width of frequencies for radar, but so far to no effect.

The voice recorder already brought some benefit to the port. The recording of some conversations served as proof for the proper reaction of the port in a case of emergency at sea which was disputed.

4.3.3 Port of Turkmenbashi

4.3.3.1 Port of Turkmenbashi – Acceptances

The Final Acceptance tests were carried out on 11 and 12 October 2004.

The equipment was tested and found to be in good working condition. The final acceptance certificate is attached as Annex 2.3 to this report.

4.3.3.2 Port of Turkmenbashi – General Remarks

Upon arrival of the expert in the vessel traffic centre in Turkmenbashi, the racks for the radio station were found nearly completely dismantled. The power supply, batteries, MF/HF transceiver and mast antenna including cables had been taken away from the vessel traffic control centre and been installed on a vessel instead. Following the claim of the HPTI expert, the missing equipment was re-installed in the VTC. Due to the fact that the time of the expert until departure was limited, all the wiring was done in a provisional manner only. The necessary tests were carried out as far as possible, because the equipment was programmed with the ship's MMSI only. The radio equipment was found in a satisfactory working condition. The antenna cable for the MF/HF receiver was patched together from several pieces of cable and it was recommended very strongly to replace the antenna cable for MF/HF transceiver and to install it as one piece, not several pieces connected.

The Inmarsat station was not programmed with the necessary ID because upon inspection the port administration still did not apply for the administrative registration which is absolutely necessary for commissioning and participation in the Inmarsat system. The equipment seemed to be working satisfactorily.

All the other delivered equipment was found in a satisfactory working condition.

During the final discussion with a representative of the port's authority the HPTI expert pointed to the fact, that the technical equipment the port has received, is an equipment to prevent accidents at sea with all their negative and dangerous environmental results or, if accidents have already happened, to react very quickly in necessary search and rescue measures. It was explained to the port's representative that the equipment was explicitly delivered to increase the safety of navigation in the Caspian Sea area by improving the shore based Vessel Traffic control centres and not to up-grade one individual vessel.



5 Final Considerations

In answer to the question why nobody had yet applied for the Inmarsat registration the HPTI expert was informed in Baku as well as in Turkmenbashi, that among other reasons the costs for registration and operation are very high, and that the port could not afford it at present.

For further similar projects it should be taken into account, that the technical equipment should be maintained regularly within certain periods to avoid expensive repairs. Except in Aktau, for maintenance and possible repairs the ports have no own technicians, who are qualified to carry out this work. Personnel who have to maintain or repair such complex technical equipment like Radar or radio equipment must have a special training for each particular apparatus of the system. When the equipment in Turkmenbashi had to be re-installed, personnel from Ashgabat had to be called, which caused cost. It will cause even more costs in case of a necessary repair, if technicians have to travel from their site office to the vessel traffic centres of the different ports.

Taking this into account, it should be considered to conclude a maintenance and repair contract for the phase following the warranty period with a firm or company who has qualified technicians available. This could either be done already in the equipment tender, or the recipients of the equipment should be obliged to sign such a maintenance contract.

Furthermore, attention should be paid to the staff, that has to work with the equipment. Reportedly, one problem in Baku was that part of the staff, which was trained in the use of the new equipment during this project, had been either deployed to other duties or left the port entirely.



Annex 1

Final Acceptances Contract 51247, Supplier: Pintsch Bamag



Annex 1.1 – Baku

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

**Supervision and Training of Navigation Aids Equipment –
Azerbaijan, Kazakhstan and Turkmenistan**

In accordance with the Service Contract for European Community External Aid No: 30552 concluded
29 January 2003

Between the European Community
represented by the Commission of the European Community
and HPTI Hamburg Port Training Institute GmbH, HPC Hamburg Port Consulting GmbH
and Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

We, the undersigned, inspected the equipment and spare parts specified in the below mentioned
supply contract (after one year of operation, beginning with the date of provisional acceptance) and
confirm that -according enclosed annex 1- quality and quantities of said items are in conformity with
terms and conditions set forth in the aforesaid supply contract¹. The respective documents are
attached hereto.

**Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku
(Azerbaijan) and Turkmenbashi (Turkmenistan);**
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 1
Supply Contract for European Community External Aid N° 51247

Equipment for the International Port of Baku

Items (according to contract specifications)	Quantity
Item 4.2.1 Mid-channel buoys	8
Port buoys	12
Starboard buoys	14
Preferred channel to starboard buoys	1
Item 4.2.2 Identification marking	40 sets
Item 4.2.3 Racon for buoy	1
Item 4.2.4 Radar reflector for beacon	1
Item 4.2.5 Lantern with solar module for beacon	2
Item 4.2.6 Flashing units (rotating beacon) for shore lighthouse (DLL6-300)	2
Flashing units (leading lights) leading light beacon (EER 130)	
Item 4.2.7 Tool set for maintenance (shore based)	1
Item 4.2.8 Tool set for maintenance (vessel based)	1
Item 4.2.9 Spare part set for buoys (shore based)	1
Item 4.2.10 Spare part set for buoys (vessel based)	1
Item 4.2.11 Solar module for shore based light	2

¹ If any defects, failures or replacement of equipment was reported, this will be listed and described
under annex 1 enclosed to this document.



Item 4.2.12 Workshop container for AtoN repair

2

Supplier Pintsch Bamag Antriebs- und Verkehrstechnik GmbH
Hünxerstr. 149
46537 Dinslaken, Germany

Supervisor HPTI Hamburg Port Training Institute GmbH
Überseezentrum, Schumacherwerder
20457 Hamburg, Germany

Date of provisional inspection

Date of final inspection 25.08.2004

Place of final inspection Baku International Sea Port, Azerbaijan

**The following signatures are only valid considering
the content of the enclosed annex 1**

HPTI Inspector

Gustav Hövermann

Supplier

Khaled Jaber

Baku International Sea Port

Soltan Kazymov

Final Acceptance Baku Contract 51247



Annex 1

List of failures, defects and/or replacements

Port of destination	item	Product description	Technical description of defect/failure	Date of defect/failure ²	Date of Replacement ³	remarks
Baku	Item 4.2.1	Buoys complete	(including spares)			
		LED lanterns	replacement according to reclamation of the port for a limited number of LED lanterns. To avoid problems (e.g. opening of lanterns by staff) the Contractor replaced all LED lanterns.	see fax of the port to contractor	20 units 01.06.04 43 units 05.08.04	
	Item 4.2.6	Flashing units (rotating beacon) for sphere lighthouse (DLL6-300)	no failsafe operation of both units. Light character is changing during operation.			Have to be clarified by Contractor after examination

HPTI Inspector

Gustav Hövermann

already solved

G.H. Hövermann

Supplier

Khaled Jaber

K. Jaber

Baku International Sea Port

Soltan Kazymov

Soltan Kazymov

² Date of information (in writing) to contractor

³ Date of arrival of equipment at recipient at Port of Baku



Annex 1.2 – Aktau

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan

In accordance with the Service Contract for European Community External Aid No: 30552 concluded 29 January 2003

Between the European Community
represented by the Commission of the European Community

and HPTI Hamburg Port Training Institute GmbH, HPC Hamburg Port Consulting GmbH and
Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

We, the undersigned, inspected the equipment and spare parts specified in the under mentioned supply contract (after one year of operation beginning with the date of provisional acceptance) and confirm that quality and quantities of said items are in conformity with terms and conditions set forth in the aforesaid supply contract. The respective documents are attached hereto.

Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku (Azerbaijan) and Turkmenbashi (Turkmenistan);
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 1
Supply Contract for European Community External Aid N° 51247

Equipment for the Port of Aktau

<u>Items</u> (according to contract specifications)	<u>Quantity</u>
Item 4.2.1 Port buoys	1
Starboard buoys	1
Item 4.2.2 Identification marking	4sets
Item 4.2.3 Racon for buoy	1
Item 4.2.7 Tool set for maintenance (shore based)	1
Item 4.2.9 Spare part set for buoys (shore based)	1
Item 4.2.12 Workshop container for AtoN repair	1

Supplier Pintsch Bamag Antriebs- und Verkehrstechnik GmbH
Hünxerstr. 149
46537 Dinslaken, Germany

Supervisor HPTI Hamburg Port Training Institute GmbH
Überseezentrum, Schumacherwerder
20457 Hamburg, Germany

Date of provisional Inspection

Date of final inspection 27.08.2004

Place of final Inspection Aktau, International Commercial Sea Port, Kazakhstan



HPTI Inspector

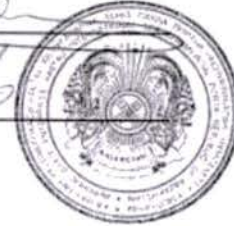
Gustav Hövermann

Supplier

Khaled Jaber

Aktau International Sea Port

Aliyev E.Y.





Annex 1.3 – Turkmenbashi

Annex 1

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

**Supervision and Training of Navigation Aids Equipment –
Azerbaijan, Kazakhstan and Turkmenistan**

In accordance with the Service Contract for European Community External Aid No: 30552 concluded 29 January 2003

Between the European Community
represented by the Commission of the European Community
and HPTI Hamburg Port Training Institute GmbH, HPC Hamburg Port Consulting GmbH and
Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

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Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku (Azerbaijan) and Turkmenbashi (Turkmenistan);
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 1
Supply Contract for European Community External Aid N° 51247

Equipment for the Port of Turkmenbashi

Items (according to contract specifications)	Quantity
Item 4.2.1 Mid-channel buoys	1
Port buoys	7
Starboard buoys	7
Preferred channel to port buoys	1
Item 4.2.2 Identification marking	25sets
Item 4.2.3 Racon for buoy	1
Item 4.2.7 Tool set for maintenance (shore based)	1
Item 4.2.8 Tool set for maintenance (vessel b.)	1
Item 4.2.9 Spare part set for buoys (shore based)	1
Item 4.2.10 Spare part set for buoys (vessel based)	1

Supplier Pintsch Bamag Antriebs- und Verkehrstechnik GmbH
Hünxerstr. 149
46537 Dinslaken, Germany

Supervisor HPTI Hamburg Port Training Institute GmbH
Überseezentrum, Schumacherwerder
20457 Hamburg, Germany

Date of provisional inspection

Date of final inspection 01.09.2004

Final Acceptance Turkmenbashi Contract 51247

1



Annex 1

Place of final Inspection

Turkmenbashi, International Commercial Sea Port, Turkmenistan

HPTI Inspector

Gustav Hövermann

Supplier

Khaled Jaber

Deputy Director of technical part

Mamedov A.A.

Chief of Ship's Service

Amanov M.A.





Annex 2

Final Acceptance
Contract N° 30551, Supplier: Transas Europe GmbH



Annex 2.1 – Baku

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan

In accordance with the Service Contract for European Community External Aid No: 30552 concluded
29 January 2003

Between the European Community
represented by the Commission of the European Community

and HPTI Hamburg Port Training Institute GmbH, HPC Hamburg Port Consulting GmbH
and Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

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supply contract (after one year of operation beginning with the date of provisional acceptance) and
confirm that quality and quantities of said items are in conformity with terms and conditions set forth in
the aforesaid supply contract¹. The respective documents are attached hereto.

**Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku
(Azerbaijan) and Turkmenbashi (Turkmenistan)**
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 2
Supply Contract for European Community External Aid N° 30551

Item	Quantity
Item 4.3.1 Radar with APRA and antenna	2
Item 4.3.3 GPS receiver for buoy maintenance vessel	2
Item 4.3.5 VHF handheld radio with marine frequencies	3
Item 4.3.6 MF + HF Radiotelephone	3
Item 4.3.7 VHF Radiotelephone	3
Item 4.3.8 INMARSAT-C station	2
Item 4.3.9 GMDSS VHF decoder	2
Item 4.3.10 GMDSS MF/HF decoder	2
Item 4.3.11 Compact GMDSS Station Console	2
Item 4.3.12 Voice recorder	2
Item 4.3.13 Binoculars 6 x 70	3
Item 4.3.14 Ship's bell clock with radio sectors	2
Item 4.3.15 Marine Aneroid Barograph	2
Item 4.3.16 Anemometer	2

¹ If any defects, failures or replacement of equipment are reported, this will be listed and described under annex 1
enclosed to this document



Supplier Transas Europe GmbH
Luruper Chaussee 125
22761 Hamburg, Germany

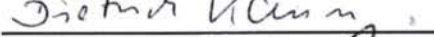
Date of Provisional Acceptance 18 / 19 September 2003

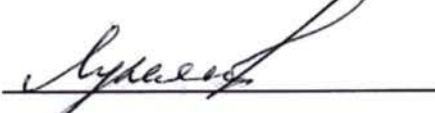
Date of Final Inspection 6 October 2004

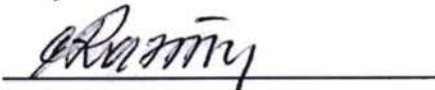
Place of Inspection Port of Baku, Azerbaijan

Supervisor HPTI Hamburg Port Training Institute GmbH
Überseezentrum, Schumacherwerder
20457 Hamburg, Germany

The following signatures are only valid considering the content of the enclosed annex 1

HPTI Inspector Dietrich Kaun 

Supplier Yury Lukjanov 

Baku International Sea Port Soltan Kazymov 

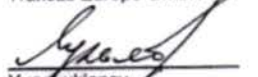


Annex 1

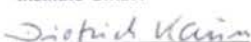
Failures, defects and/or replacements

Port of destination	Item	Product description	Technical description of defect/failure	Date of defect/failure ²	Date of Replacement ¹	Remarks
Baku	Item 4.3.1	Radar with APRA and antenna	Power supply (s/n 100005245/04) the processing module of the of the radars did not work properly	23.01.2004	01.05.2004	Warranty period is extended until 12.01.2005
	Item 4.3.8	INMARSAT-C station				Commissioning not possible due to missing Inmarsat registration. Seems to be in satisfactory working condition.
	Item 4.3.16	2 Anemometers	Were not working properly	18.05.2004	05.10.2005	Warranty period is extended until 01.03.2005

Supplier
Transas Europe GmbH


Yury Lukjanov

Supervisor
HPTI Hamburg Port Training
Institute GmbH


Dietrich Kaun

Recipient
Baku International Sea Port


Soltan Kazymov

² Date of information (in writing) to contractor

¹ Date of arrival of equipment at recipient at Port of Baku



Annex 2.2 – Aktau

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan

In accordance with the Service Contract for European Community External Aid No: 30552 concluded 29 January 2003

Between the European Community
represented by the Commission of the European Community
and HPTI Hamburg Port Training Institute GmbH, HPC Hamburg Port Consulting GmbH
and Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

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Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku (Azerbaijan) and Turkmenbashi (Turkmenistan)
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 2
Supply Contract for European Community External Aid N° 30551

Item	Quantity
Item 4.3.1 Radar with APRA and antenna	1
Item 4.3.4 GPS receiver for buoy synchronisation	2
Item 4.3.5 VHF handheld radio with marine frequencies	2
Item 4.3.8 INMARSAT-C station	1
Item 4.3.12 Voice recorder	1
Item 4.3.13 Binoculars 6 x 70	2
Item 4.3.14 Ship's bell clock with radio sectors	1
Item 4.3.15 Marine Aneroid Barograph	1
Item 4.3.16 Anemometer	1

Supplier Transas Europe GmbH
Luruper Chaussee 125
22761 Hamburg, Germany

Date of Provisional Acceptance 25 September 2003

Date of Final Inspection 8 October 2004

Place of Inspection Port of Aktau, Kazakhstan

¹ If any defects, failures or replacement of equipment are reported, this will be listed and described under annex 1 enclosed to this document



Supervisor

HPTI Hamburg Port Training Institute GmbH
Überseezentrum, Schumacherwerder
20457 Hamburg, Germany

The following signatures are only valid considering the content of
the enclosed annex 1

HPTI Inspector

Dietrich Kaun *Dietrich Kaun*

Supplier

Yury Lukjanov *Yury Lukjanov*

Aktau International Sea
Commercial Port

Vladimir L. Konstantinov *Vladimir L. Konstantinov*

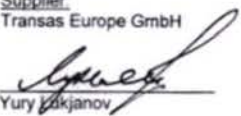


Annex 1

Failures, defects and/or replacements

Port of destination	Item	Product description	Technical description of defect/failure	Date of defect/failure ²	Date of Replacement ³	Remarks
Aktau	Item 4.3.8	INMARSAT-C station				Commissioning not possible due to missing Inmarsat registration. Seems to be in satisfactory working condition.
	Item 4.3.16	Anemometer	The wind speed was not shown correctly.	07.02.2004	01.11.2005	Commissioning not possible. Equipment still waiting for customs clearance. Warranty period is extended until 01.08.2005.
	Item 4.3.15	Marine Aneroid Barograph	Glass of covering box was broken.	15.09.2003	07.02.2004	Warranty is extended until 28.02.2005.

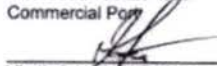
Supplier:
Transas Europe GmbH


Yury Lukjanov

Supervisor:
HPTI Hamburg Port Training
Institute GmbH


Dietrich Kaun

Recipient:
Aktau International Sea
Commercial Port


Vladimir L. Konstantinov

² Date of information (in writing) to contractor

³ Date of arrival of equipment at recipient at Port of Aktau



Annex 2.3 – Turkmenbashi

- Final Acceptance -

Project No. EUROPEAID/112971/C/SV/Multi
Service Contract for European Community External Aid No: 30552

Supervision and Training of Navigation Aids Equipment – Azerbaijan, Kazakhstan and Turkmenistan

In accordance with the Service Contract for European Community External Aid No: 30552 concluded 29 January 2003

Between the European Community
represented by the Commission of the European Community

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and Uniconsult Universal Transport Consulting GmbH
Represented by HPTI

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Contract: Supply of Aids to Navigation Equipment to the Ports of Aktau (Kazakhstan), Baku (Azerbaijan) and Turkmenbashi (Turkmenistan)
Identification No. EuropeAid/112336/C/S/WW – TACIS – (Re-Tender) Lot 2
Supply Contract for European Community External Aid N° 30551

Item	Quantity
Item 4.3.1 Radar with APRA and antenna	1
Item 4.3.3 GPS receiver for buoy maintenance vessel	1
Item 4.3.5 VHF handheld radio with marine frequencies	2
Item 4.3.6 MF + HF Radiotelephone	1
Item 4.3.7 VHF Radiotelephone	1
Item 4.3.8 INMARSAT-C station	1
Item 4.3.9 GMDSS VHF decoder	1
Item 4.3.10 GMDSS MF/HF decoder	1
Item 4.3.11 Compact GMDSS Station Console	1
Item 4.3.12 Voice recorder	1
Item 4.3.13 Binoculars 6 x 70	1
Item 4.3.14 Ship's bell clock with radio sectors	1
Item 4.3.15 Marine Aneroid Barograph	1
Item 4.3.16 Anemometer	1

¹ If any defects, failures or replacement of equipment are reported, this will be listed and described under annex 1 enclosed to this document



<u>Supplier</u>	Transas Europe GmbH Luruper Chaussee 125 22761 Hamburg, Germany
<u>Date of Provisional Acceptance</u>	30 September 2003
<u>Date of Final Inspection</u>	13 October 2004
<u>Place of Inspection</u>	Turkmenbashi, International Commercial Sea Port, Turkmenistan
<u>Supervisor</u>	HPTI Hamburg Port Training Institute GmbH Überseezentrum, Schumacherwerder 20457 Hamburg, Germany
<u>HPTI Inspector</u>	Dietrich Kaun 
<u>Supplier</u>	Mikhail Kirilin 
<u>Director of Turkmenbashi International Commercial Sea Port</u>	Atayev Murad 



Annex 1



Failures, defects and/or replacements

Port of destination	Item	Product description	Technical description of defect/failure	Date of defect/failure ²	Date of Replacement ³	Remarks
Turkmenbashi						
	Item 4.3.8	INMARSAT-C station				Commissioning is not possible due to missing Inmarsat registration. Seems to be in satisfactory working condition.

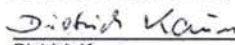
Supplier:

Transas Europe GmbH
Luruper Chaussee 125
22761 Hamburg, Germany


Mikhail Kirilin

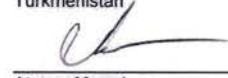
Supervisor:

HPTI Hamburg Port Training
Institute GmbH
Überseezentrum,
Schumacherwerder
20457 Hamburg, Germany


Dietrich Kaun

Recipient:

Turkmenbashi International Sea
Commercial Port
Turkmenbashi
Turkmenistan


Atayev Murad

² Date of information (in writing) to contractor

³ Date of arrival of equipment at recipient at Port of Turkmenbashi

Final Acceptance Turkmenbashi, Contract 30551



Annex 3

Report on Construction Supervision of Tug Boat



Activity Report 2004 on the Technical Assistance Support for Aktau Commercial Seaport concerning supervision of construction of a Tug Boat.

Summary of Activities

Date	Activity	Remarks
10. Aug - 15. Sep 04	Hamburg, Germany	Checking of tug boat design, review of drawings, clarifying missing or ambiguous items, initiation of necessary changes to design and drawings.
4. – 6. Oct. 04	First inspection visit to Damen Shipyard Galati, Romania	Checking of steel plates for Lloyds Register and rolling mill stamps, checking of cutting works.
4. – 5. Nov. 04	Visit to headquarters of Damen Shipyard in Gorinchem, NL	Discussion of results of first on-site inspection, review of amended drawings.
7. – 9. Nov. 04	Second inspection visit to Damen Shipyard Galati, Romania	Checking of material preparation and quality of welding works
10. – 12. Nov. 04	Visit to beneficiary, Aktau Commercial Sea Port, Kazakhstan	Provision of support to the port management during an information and clarification visit of the tug boat contractor Damen Shipyard (NL) to Aktau.
12. – 14. Dec. 04	Third inspection visit to Damen Shipyard Galati, Romania	

Checking of Tug Boat Design

On August 10th, 2004 the consultant received from Damen Shipyard the drawings of hull and machinery for the tugboat STAN 2208. The remaining documents, i.a. a copy of the final contract specifications, GA plan, accommodation drawings etc. were provided a few days later.

Drawings and design were in general acceptable, deviations from contract specifications have been discussed and clarified with Damen Shipyard. The contractor has shown a considerable degree of cooperation, the management of Aktau Sea Commercial Port (ACSP) have been continuously informed on the discussion process between the consultant and the contractor. Major decisions, such as the final decision on the type of tug boat propulsion, have been left to the port management with the consultant providing advise. Some open technical questions, which did not require urgent attention where agreed to be discussed and solved during a later personal meeting in Gorinchem or Aktau.

First Inspection Visit to Damen Shipyard in Galati (Romania)

The consultant's first on site inspection of construction works took place on 5 October 2004. The consultant inspected the steel plates and checked them for Lloyds Register and rolling mill stamps. The following progress could be noted: the deck plates for the fore and aft hull sections, being erected upside down, were already laid, bulkheads were cut to size, main engine foundations with surrounding steel structures and double bottom tanks were under fabrication. Various other structural members were already cut to size and prepared for welding. The construction works were generally proceeding according to schedule. The



consultant's comments on the quality of the cutting and welding were noted by the shipyard management and scheduled for urgent improvement.

Visit to the Contractor Damen Shipyard in Gorinchem (NL)

The consultant visited the headquarters of the contractor in Gorinchem on 4 to 5 November 2004 in order to discuss the results of his first inspection visit and inform them on his schedule for the second visit as well as his mission to Aktau. Moreover, the consultant reviewed the drawings in order to check whether his comments on the tug boat design have been taken into account.

Second Inspection Visit to Damen Shipyard in Galati (Romania)

The second on-site inspection visit took place from 7 to 9 November 2004. The consultant noted that at the fore and aft sections of the hull, all frames, deck beams, double bottom tanks and stringers were in place and tack welded for final alignment. Some continuous welding was already under progress. The shell plating was under preparation to be attached to the frames.

Work progress is according to schedule. The quality of material preparation and welding is good and at this time no delays on the delivery date are being expected so far.

Pictures documenting the construction progress during the second site visit are attached below.

Visit to the Beneficiary

From 10 to 12 November 2004 the consultant visited the Port of Aktau in order to support the port management during discussions and clarifications of open technical details with the winner of the tug boat construction contract, Damen Shipyard. The contractor was represented by Mr. Jan Piësla (Area Sales Manager Europe) and Mr. Henk Pruysen (Production Manager for the tug boat) from Damen Shipyard Gorinchem (NL). The Aktau Commercial Seaport was represented by Mr. Vladimir Konstantinov (Technical Director), Mr. Lamzin (Port Captain), Mr. Igor Procenko (Director Communication Systems).

The following topics were discussed:

1. use of the tug boat for buoy handling,
 2. type of fire fighting foam to be used,
 3. arrangement and requirement for crew training,
 4. others.
-
1. The port management expressed the Port's desire to handle and lift not only the existing buoys marking the access channel but also the anchors of the buoys. As this desire has not previously been expressed by ACSP it has not been reflected in the technical specifications and therefore is not included in the contract signed between the Port and Damen Shipyard. In this respect the contract only provides for a tug boat equipped for lifting and carrying buoys of 1.5 tons each.

Due to the weight of the two anchors per buoy of 2.5 tons each, one made from cast iron and the other made from concrete, plus 2 x 16 m steel chain with links of 30 mm diameter, Damen Shipyard has to recalculate the stability of the tug boat, the strength of the deck to place anchors and chains in addition to the buoys, select a more powerful crane with a winch, recalculate the strength of the crane foundation,



add a chain stopper on deck as well as means to protect the deck from being damaged from chain and anchor handling.

The Port's a.m. new requirement will most likely increase the price of the vessel provided that it is technically feasible to enhance stability of the tug boat in a way to permit simultaneous lifting of the anchors and chains.

2. With regard to the type of fire fighting foam currently used by the port, the port experts stated that this type is only suitable for temperatures above +5 centigrade which in winter times can create a problem with the aft peak tank as projected by Damen Shipyard. The aft peak tank is partly above the waterline and thus exposed to the outside temperature which in winter times can drop to below zero centigrade. Moreover, the foam used by the port is very aggressive and requires the use of stainless steel for tanks, piping, armatures and monitors, which is not foreseen in the contract. Damen Shipyard will provide information, which types of foam are suitable for the equipment Damen Shipyard will install on the tug.
3. Regarding the training requirements it was agreed that Damen Shipyard will prepare a proposal for the training of the technicians and nautical officers, taking into consideration that the Port so far has practically no staff who is familiar with the modern technology that will be fitted on the new tug.

The presently chartered tug from Azerbaijan with Azeri crew, is a floating museum in all respects. The two main engines are massive two stroke, loop scavenge, trunk piston engines with a scavenging air piston pump, having a nominal output of 600 HP at 380 rpm each. Such engines were out of production in the western world immediately after the 2nd world war. The other equipment is likewise outdated. It is therefore very important to provide the future crew with a very extensive training by a Russian speaking expert, especially for the main engines, to be able to handle the new tug.

4. Some other items, such as using the fore peak only as a void space and not as a ballast tank, position of the company logo, name and port of registry on the tug, the paint specification in accordance to the RAL paint schedule and installation of a DVD player instead of a VCR in the mess room were discussed and decided on.

Third Inspection Visit to Damen Shipyard in Galati (Romania)

The third on-site inspection visit in Galati took place from 12 to 14 December 2004. The consultant noted the following:

Construction of the fore and aft hull sections is progressing well and according to schedule. About 90% of the welding of the aft section of the hull has been completed. On 13 December 2004, at 14.30hrs the aft section was moved out of the shipbuilding hall and placed under the 320 tons capacity gantry crane. There, the aft section was turned from upside down to keel down position and was then transported and lowered into a protected production area on the slipway. The protected production area is an improvised shipbuilding hall, built from a structural steel frame which is covered by weather-tight tarpaulins and removable roof sections. Here, the remaining welding work will be done as well as all other work such as pipe installation, nozzle installation etc.

The forward section is still in the shipbuilding hall. A small area of the shell plating at the lower bow is not yet fitted. Anchor pockets were being adjusted and prepared for welding. Cooling channels were not yet fitted and a lot of welding work is still to be done. So far, welding preparation and quality of welding is good. Some pipes are already fitted, especially those which are permanently fitted as well as a number of the thick walled pipes passing through the fuel tanks.



The shipyard management intends to move the forward section out of the shipbuilding half in the first half of January 2005. The alignment of the forward section with the aft section and the welding of the two sections into the complete hull is scheduled for the end of January 2005. Once this is done, installation of machinery and cables will commence. The main engines and transmissions will arrive at the Yard before the end of 2004. Delivery ex Constanta after successful sea trials is scheduled for June 25, 2005.

Presently, production is running on schedule and no delays are expected.

As discussed during the visit to the client in November 2004, the contractor Damen Shipyards has designed the modifications of the crane and the deck equipment to provide the Port of Aktau with the possibility to lift also the two anchors and chains of each buoy. The technical specifications attached to the building contract required a tug boat design enabling to lift the buoys only, not the two anchors and the chains. Now, a more powerful crane will be installed with an additional winch on top to provide sufficient wire length to lift the chains and finally the two anchors onto the deck of the tug. The bulwark on portside will be removable for handling the anchors and chains. The deck in that area will be covered with 50 mm hard wood for protection and a chain stopper will be permanently fitted on the deck at portside to arrest each length of chain lifted on board by the crane.

The modifications including the stability calculation have been submitted to Lloyds Register for approval.

The next visit is scheduled for January 2005 and will be coordinated with Damen Shipyards in Galati for the Consultant to be at the yard at the time the forward section is ready for transfer to the slipway and turning from upside down to keel down position.



Documentary of second inspection visit to Damen Shipyard in Galati (November 2004)



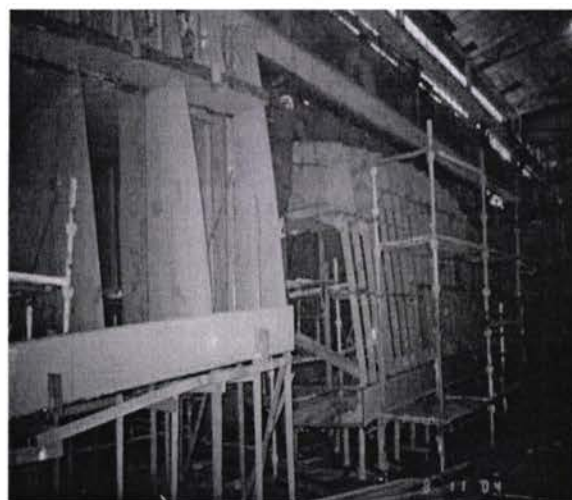
Frame setting of bow section, foreship still upside down



Starboard side shell frames with deck reinforcement brackets



Framing stern section seen from inside engine room space with aft ship section still upside down

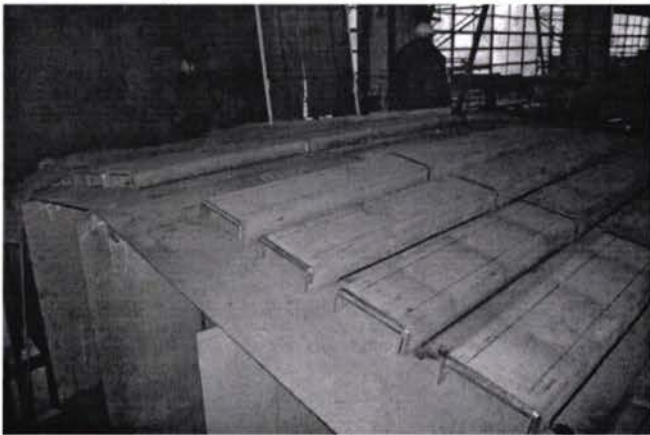


On left side stb foreship section, on the right side in the background stb side of aftship section



View of complete bow frame setting with foreship section still upside down

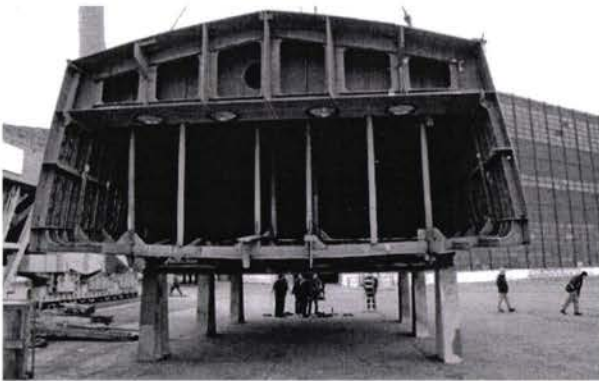
Documentary of third inspection visit to Damen Shipyards in Galati (December 2004)



Aft Section Cooling Channels



Aft Section on the way to slipway for turning



Aft section before turning: view into engine room



Main deck of aft section during turning



Bottom of aft section during turning