



**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
March 2005*



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The European Union*



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HPTI Hamburg Port Training Institute GmbH*



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Hamburg, 4 April 2005
Wagner/.26324Report3

**Supervision and Training of Navigation Aids Equipment – Azerbaijan,
Kazakhstan and Turkmenistan**
Contract No: 30552

Dear Ms Zwicky,

Attached please find the English and Russian versions of the Project Progress Report 3 to the a.m. project as well as the electronic version.

As this report only concerns the port of Aktau and nobody else of the initial beneficiaries of the projects, I only distribute the report to Kazakhstan – the Ministry of Transport and Communications in Astana, the EC Delegation in Kazakhstan, the Tacis office and the Port of Aktau.

I ask you to treat the report confidentially and not to publish it to a wider public.

With kind regards

HPTI Hamburg Port Training Institute GmbH

Helga Wagner

Project Co-ordinator and Team Leader



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: March 2005
Reporting Period: Progress Report – Supervision of Construction of Tug Boat
Author of Report: HPTI – HPC – Uniconsult Consortium

Traceca Coordination Team	_____ (Name)	_____ (Signature)	_____ (Date)
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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 leasing of 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

Leasing of Tug Boats

Port of Aktau is supported in tendering procedures

The timely supply of Tug Boats under the frame of a leasing 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 leasing of Tug Boats

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(s) 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 inspection of the offered tug boat(s)
6. Take part in operations testing
7. Assist in commissioning

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 of 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, advice 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.

The entire project tasks were completed during the last reporting period.

2.2.2 Training

The objective of this task is to support by appropriate training measures the supply and installation of the Aids to Navigation and other Nautical Equipment and Materials that the EC is proposing to grant under the a.m. supply project and subsequent contracts signed between the European Commission and the successful bidders.

The entire project activities were completed during the last reporting period.



3 Technical Assistance for the Purchase of a Tug Boat

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.

3.1 Assistance during the construction of the tug boat

During the previous reporting period 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.

Details of the construction supervision of the tug boat are described below.

3.2 Activities

3.2.1 Summary of Activities

Date	Activity	Remarks
Jan 25 th -28 th , 2005	Fourth inspection visit to Damen Shipyard Galati, Romania	Construction work is according to schedule, quality of work is good. Some necessary minor changes to the design have been reported to DAMEN Shipyard.
Feb 17 th -20 th , 2005	Fifth inspection visit to Damen Shipyard Galati, Romania	Coordinated visit with DAMEN project manager. Adjustment of design has been discussed. DAMEN will comply. The hull is almost completed, construction work is according to schedule, quality of work is good.
Mar 15 th -17 th , 2005	Sixth inspection visit to Damen Shipyard Galati, Romania	Experts of Lloyds' Register did not show. Check of progress on hull, engine and accommodation. Progress seems to be two weeks behind schedule. DAMEN confirms completion end of June.



3.2.2 Fourth Inspection Visit to Damen Shipyard in Galati (Romania)

Prior to the fourth on-site inspection visit, which took place from January 25th - 28th, 2005, the consultant received revised drawings from DAMEN Shipyard taking into account the results of the visit to the beneficiary in November 2004 as well as the consultant's comments made during the first three inspection visits. The consultant reviewed these drawings and noted some minor issues, which were reported together with the results of the fourth inspection visit to the DAMEN project manager Mr. Henk Pruysen.

During the on-site visit to Galati the consultant noted the following:

- Both hull sections fore and aft were found to be completely welded together, sitting on high blocks inside the provisional shelter at the outside construction area in reach of the 320 t capacity gantry crane.
- The cooling channels on the bottom of the hull were still open and not yet cleaned.
- The bulwark plating had been put in place with bulwark stanchions and plating under alignment and partly tack welded.
- The deckhouse had been fabricated, and put in place on the fore ship. Alignment was under way. Welding to the hull had not yet started.
- Wheelhouse construction had started in upside down position inside the shipbuilding hall.
- Fastening plates for the bow fenders had been put in place, aligned and partly welded.
- In the engine room tank top plating for bilge water tank, lubrication oil tank and bossing for both shaft lines had not yet been fitted.
- All exhaust silencers had been fitted and exhaust pipes between silencers and transom plate had been installed and welded into the transom plate.
- The prefabricated general service module had been installed in the engine room on portside (bilge/deckwash/internal fire fighting systems) and pipe installation was under way.
- The prefabricated fuel oil service module had been installed aft of the fuel oil service tank.
- Pipe installation in the fore ship double bottom tanks were under way.

Progress is good and on schedule. So far also the workmanship is good.

As there are currently two tug boats of the same series 2208 as the Aktau tug boat at a more advanced construction stage in Galati, the consultant took the chance to review these tugs. The design of this series is a rather new one and design deficiencies and possible problems occurring during the construction of these two tugs should be detected at the earliest possible stage possible in order to avoid the same problems with the Aktau tug. The consultant noted some necessary design improvements, which would significantly facilitate day-to-day operations and maintenance of the tug boat and requested the DAMEN project manager to adjust the design of the Aktau tug boat accordingly. The requested changes can be made without any delay of the work schedule.

3.2.3 Fifth Inspection Visit to Damen Shipyard in Galati (Romania)

The fifth on-site inspection visit took place from February 17th - 20th, 2005. This visit was coordinated with the DAMEN project manager Mr. Henk Pruysen to have a joint look at the various open items, which



need to be modified and improved. During this inspection visit the consultant noted the following:

- The air condition unit was unwrapped in the warehouse. The consultant demonstrated that the location of a magnetic valve and the suction pressure regulator behind the electric control panel, which will both not be accessible once the unit is installed onboard, were not suitable. Photos were taken in the warehouse and on board of another tug of the 2208 series where the a/c unit had already been installed. DAMEN Engineering will take care of this problem.
- The non-accessible electric motor and pump of the hydrofor unit were shown to Mr. Pruysen on another tug of the 2208 series. An access hatch will be provided from the stair that comes down from the main deck to the below deck accommodation.
- The position of the exhaust fan from the below deck sanitary space behind the outer wall of the chief engineer's cabin without any access hatch was shown to Mr. Pruysen on another 2208 tug. The fan will be relocated to a place with easy access and a hatch will be provided.
- To relocate the bunkbed in the captain's cabin from the outboard to the inboard bulkhead requires major design changes which is not possible any more at this stage. Both wardrobes will be placed side by side together with a small sofa on the inboard bulkhead.
- Since the supplier of the hydraulic unit for the steering gear has not yet provided a drawing of the internal parts of the hydraulic tank it could not yet be determined if there is sufficient height to remove the electric motor from the tank without major work.
- Work on the hull was in an advanced state. Except for some welding work on the wheelhouse, deckhouse, windlass foundations, cooling channels and bulwark most of the hull construction had been completed. Once the remaining welding has been done, the last job would be to align and weld the propeller nozzles to the hull. The starboard nozzle had already been in place and the portside nozzle was lifted in position during the visit. Alignment will take place in calendar weeks 9 and 10. It is expected that Lloyds Register as the classification society and DAMEN will then issue the "Hull completed" certificate.
- In the engine room tanks have been cleaned and prepared for pressure testing. Pipe installation is ongoing and cable tray installation has started.
- In the below deck accommodation area spikes had been welded to the bulkheads for mounting of the insulation and on the floors welding of "S"-like anchors from round steel was under way to provide a solid base for the cement floor to be fitted later.
- Bow and stern rubber fenders had already been partly fitted and the remaining fenders were ready to be fitted.
- Propeller shafts, propellers, shaft couplings, Vulkan elastic couplings and Reintjes transmissions were inspected in the warehouse. Both propellers were pulled on to the shafts and the touching area on the cones checked.

During earlier negotiations for two other new buildings also constructed by DAMEN Shipyard and supervised by the consultant, DAMEN agreed to provide the customer with the access codes to the electronically controlled Caterpillar main engines together with the software, and to provide a five day special training on the electronics for up to five personnel using real equipment (no simulation) at the Caterpillar distributor in Holland. The port management has already identified three qualified personnel for this training.

Progress is good and on schedule. So far, also the workmanship is good. The consultant estimates that sea trials in Bulgaria can start as early as end of June 2005. Pictures documenting the progress during the



fifth site visit are attached in the Annex.

3.2.4 Sixth Inspection Visit to Damen Shipyard in Galati (Romania)

Prior to this visit, which took place March 15th to 17th, 2005, the consultant had provided the Port of Aktau with a manning schedule for the tug boat. The manning schedule included the number of seamen per shift, their positions and minimum qualifications for key staff. The manning schedule was intended help the port management to timely identify qualified crew members to be deployed on the tug boat. Crew members will be trained on board of the tug boat after arrival in Aktau. On request of the consulting engineer DAMEN Shipyard will deploy in Aktau an on-site mechanical engineer during the first few months of operations.

A training programme during commissioning in Galati was declined by DAMEN Shipyards as there will be not enough space on board for training during sea trials. The engine room will be packed with measurement equipment and technicians of various supplier companies.

During the inspection visit the consultant noted the following:

- Nozzles and propeller shaft brackets were in position but not yet welded. Preparations for the installation of the stern tubes started on March 16th by cutting the passages through the bottom frames and the shell plating. Name and home port were tack welded at the transom and the name was also tack welded at the portside bow.
- The anchor windlass had been installed and electric cable connections were under way. It was requested to turn the electric motor clockwise for protection of the cable junction box and to install a strong bar above the electric motor for protection.
- Pressure testing of various tanks had been successfully completed and pressure testing of the keel cooling channels was ongoing.
- Hull cleaning, shot blasting and application of the first coat of anticorrosion paint will only be done after completion of all outstanding welding work (nozzles, shaft brackets and stern tubes).
- Cable and air condition duct installation started in the below deck accommodation and in the main deck superstructure. Work on the floors in the wash rooms had started as well.
- In the engine room pipe installation and fitting of cable trays was under way. Fitting of cables had started.

In spite of arrangements made and confirmation received by the DAMEN site office that a surveyor of Lloyds Register would be available on March 16th, 2005 to discuss various points with the consultant, none of the three surveyors of the Galati LR office showed up at the yard. For the next visit it must be guaranteed that one of the surveyors (shipbuilding) will be available so that the various items tested and certified can be checked jointly.

According to the updated production schedule of March 11th, 2005 it appeared that the production is about two weeks behind schedule. DAMEN insisted that this will not effect the delivery date of June 24th, 2005.



4 Summary of Project Planning for the Remainder of the Project

Supervision

Completed. No more activities

Training

All training activities have been finalised.

Assistance with the purchase of a tug boat

The supervisor will carry out regular inspections of the tug boat construction as well as pre-shipment inspections



Annex 1: Documentary of fifth inspection visit to Damen Shipyard in Galati (February 2005)



Air conditioning unit, instrument panel



Hydraulic steering gear, tank and E-Motor for pump



Yellow building tent for tug



Welding on ceiling superstructure forward Port Side



Anchor windlass



Propulsion shaft couplings



Annex 2: Documentary of sixth inspection visit to Damen Shipyard in Galati (March 2005)



Propeller shaft Star Board



Stern at Star Board



Sterntubes ready for installation



View aft deck towards superstructure



View from wheelhouse to forecastle with anchor windlass



View from wheelhouse towards aft deck



View from bow towards superstructure



Final check tank Nr 6



Bilge/ballast module



Accommodation maindeck forward



Stern: name, homeport



View from aft forward Port Side

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