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Lithuania Final Country Report

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Appledore *international*

Page Number

Contents

Appledore *international*

EXECUTIVE SUMMARY

APPROACH

Our research for Lithuania has been based upon a mix of desk research, data collection (utilising information from our own and public sources) and shipyard visits. We have visited all of the four shipyards in the sector and we also met with the government official concerned with the privatisation of the Shipyards. In terms of desk research and data sources, we have used the Fairplay WSE proprietary database and other publications to provide additional information regarding on-going deliveries of completed vessels and new orders won. We have also used archive searches on Lloyds List and other internet based sources to provide both background and detailed information for the study.

During our visit to the yards we discussed the current situation in each enterprise and in the sector generally and we visited the facilities and observed work in practice. Additionally each shipyard was provided with details of the information we had already collated for the period of study from internal and public sources. We requested that they correct and complete the information to the best of their ability and then return it to us in time to complete our country report. To overcome yard concerns we agreed with the Commission that detailed data collected from the shipyards in this manner was provided to us in confidence. The level of yard details to be included in the tables of the country report was explained and each yard was given the opportunity to view the structure of information to be included. We had a mixed response in terms to our request with two out of the four yards providing written responses to supplement that obtained or verified verbally during the visit. We also obtained further information from the other two, larger, yards but not, unfortunately, on certain aspects of shiprepair workload.

SECTOR OVERVIEW

The Lithuanian sector comprise four enterprises, three of which are predominantly or exclusively shiprepair yards. Shipbuilding activity lies mainly with one enterprise, although one of the other companies has recently commenced construction of steel hulls for delivery through 1999 - 2000. Significant progress has been made with privatisation, with three enterprises having been privatised during the period under review. Ownership of these comprises a mix of international and domestic investors. The fourth yard still has a 70% holding by the regional government with no official decision regarding the sale of this holding.

For the period under review (1996 – 1998) the sector is estimated to comprise:

- Yards : 4
- Employment : 4,200 approx.
- Turnover : US $ 50 million pa (approx.) average1996 – 1998
- Sectors : Shipbuilding and shiprepair (approx. 37% /63% by turnover)
- Ships/Hulls Built : 4.3 pa average (1996-1998) (6 ships + 7 hulls over 3 years)
- CGT Output : 13,450 pa average (1996-1998)

In terms of the overall importance of the sector to the Lithuanian economy, we have considered this in terms of employment and GDP. We have compared the 3 year average figures above with the available statistics for the country (GDP for 1999 from World Bank Development Indicators and employment figures for 1998 from the ILO database).

- Shipyard turnover at US$ 50 million pa represents 0.5% of the GDP for 1999
- Shipyard employment at 4,200 represents approximately 2.5% of total employment and 13.4% of manufacturing employment.

It can be seen therefore that the sector is more significant in employment terms than in financial terms and that it represents a major element of manufacturing industry employment. Our comparison has been made against manufacturing employment on the basis that this is the most relevant sector, however it should be recognised that shiprepair activity whilst an engineering activity is however a service rather than manufacturing activity. In geographical terms all the enterprises are located in the town of Klaipeda, which is the main port and the third largest town in Lithuania and as such the importance of the sector to that regional economy is significantly greater.

Employment levels have remained relatively stable over the period of the review and into 1999 and with three of the enterprises now under new management, it would seem that significant uncertainty rests mainly with the remaining state owned enterprise. The employment level at this enterprise is under 10% of the sector as a whole.

It can be seen from this that partially outfitted or steel hull production is a significant part of the shipbuilding output, and accounts for around 60% of the shipbuilding activity. Additionally it should be noted that the Baltija shipyard undertakes significant steel unit fabrication for its parent and other companies.

Within the sector, the activities relate predominantly to merchant vessels, with little or no activity in the military/naval sub-sector. Repair work covers a wide spectrum of vessel types up to a maximum vessel size of approximately 60,000 dwt. Conversion activity at the present time seems to concentrate more on smaller vessels and less sophisticated cargo ships. Fishing vessels form a significant element of the workload, reflecting the sector's recent history as the primary repair base for the former Soviet Union fishing fleet, but with the emphasis now on serving the Baltic Sea fleets including Scandinavian vessels.

In terms of shipbuilding, the Baltija yard specialises on the construction of major ship sections, including outfitting work, for other shipyards including its parent company Odense. The quay facilities at Baltija, have recently been developed to enhance its capability for volume delivery of such sections, in addition to the launch of complete vessels/hulls, which the yard still builds. The Western Shiprepair yard has recently entered into the shipbuilding market with the construction of small hulls, however the delivery of these was in 1999 and is therefore not reflected in the reference period workloads.

SECTOR COMPETITIVENESS

We have looked at the sector competitiveness in relation to future membership of the EU against a variety of factors in the main body of this report. We have summarised the major points here under the following categories:

- Ownership and Privatisation
- Financial Performance and Subsidy
- Labour Costs, Productivity and Capacity
- Customer Base and Orderbook
- Technological and Product Related
- Environmental and Health & Safety

The sector is predominantly privatised with only one of the four enterprises remaining under public majority ownership. There appears to be no official decision regarding the sale of the remaining 70% public shareholding which is currently held by the Klaipeda regional government. Privatisation has resulted in a mix of domestic and international investors.

For the period under review (1996 to 198) three of the four shipyards have been profitable. The fourth yard, Klaipeda is still state owned and has made losses over the period and has seen a reduction in its workload. Losses were recorded at two of the privatised yards during 1999, however it seems that this may be part of the privatisation and restructuring of these. The future for the three privatised yards appear relatively positive under their new management, with current restructuring and other future plans, although clearly this is unproven yet in the case of the two yards privatised in 1998 and 1999. The future for the Klaipeda yard looks much less positive particularly in view of the uncertainty about its future direction and ownership.

The yards have advised us that they do not have access to operational subsidies from government. We did not identify any other form of state support, although it is not clear whether the on-going losses at the Klaipeda yard represent some non-commercial intervention. It should be noted however that this yard is in part suffering from the bankruptcy and bad debt of another state owned enterprise and the yard is presently selling off assets to reduce its cost base and losses.

Labour costs are very low in comparison with Western European yards which provides a cost advantage, although this is partially defrayed by higher levels of overhead costs and lower productivity. Shipyard prime labour costs are low at around US$1.20/hour. Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists. Shipbuilding productivity levels have been calculated to be approximately 9 CGT/ employee year however we have only limited information regarding steel/section construction workload and we believe this may significantly understate performance. Productivity levels are considered to be lower than Western European average however the advantage of much lower labour cost would make the sector very cost competitive. Shipbuilding output has varied significantly from year to year, however we believe this trend may be distorted by the absence of detailed information regarding construction of ship sections and the restructuring process. Turnover for the whole sector has however remain relatively constant over the period of the review. All the yards in the sector are working below their full physical capacity and there is clearly considerable scope for capacity increases, through productivity improvement and/or increased employment.

The sector has managed to broaden its shiprepair customer base beyond the traditional domestic former Soviet Union and Eastern European markets and is securing work increasingly from Scandinavia, Western Europe and other parts of the world. This is trend more advanced in the two larger yards under foreign ownership, whereas the two smaller yards still secure the majority of their workload from a former Soviety Union and Eastern European customer base. We believe there is scope to broaden the customer base further and that this will happen progressively over the next few years. In shipbuilding terms the focus is very much toward EU countries, reflecting the ownership of the Baltija yard by the Danish Odense yard. We were unable to get full details of the forward shipbuilding orderbook from the yard, however from our discussions, we believe, that the yard will benefit from an on-going flow of work from its parent company in addition to the two orders from external customers, that are identified in public data sources.

Shipbuilding technology have been assessed at Level 3.5 on a five point technology scale whilst shiprepair technology has been assessed at Level 1-3 on a similar scale. In terms of repair technology there is considerable diversity within the sector, with the smallest yard operating at a basic level. It seems clear however that the two larger yards operate as competent international operators and we have no reason to believe that the two smaller yards do not satisfy the requirements of the

traditional customer base. At the Mangali yard, the new management may well move the yard progressively towards a more international customer base. We believe there is potential for improvement in terms of strengthening managerial and organisational skills and developing a stronger base of substantive experience on a wider and more complex shiprepair/conversion workload.

In terms of environmental and health and safety aspects, it is believed that there is room for improvement particularly at the smaller repair yards and that this will be required to meet the existing EU environmental legislation. Some of these reflect common issues with other shiyards both world-wide and within the EU, however its is believed that the level of both environmental control and health and safety practice is generally lower than in the larger EU shipyards. There is however evidence of significant changes at the two larger yards under their new management.

In summary we see that the industry is making significant progress into the market economy and international customer base, with the two larger yards having made more progress to date. Current levels of activity demonstrate that the major yards can successfully operate technically within a commercial economy, although it is too early to comment on the financial success of the two most recently privatised yards. Concern exists over the future of the smallest s remaining state owned yard. There is significant potential for improvement to maintain or build on the apparent cost advantage, technical competence and location of the sector. Some form of assistance may be required to assist with improving environmental and health and safety environments.

1. INTRODUCTION

Our research for Lithuania has been based upon a mix of desk, data and shipyard visits. We have visited the four shipyards in the sector, three of which are predominantly or exclusively shiprepair yards. Shipbuilding activity lies mainly with one enterprise, although one of the other companies has recently commenced construction of steel hulls for delivery through 1999 - 2000.

Significant progress has been made with privatisation, with three enterprises having been privatised during the period under review. Ownership of these comprises a mix of international and domestic investors. The fourth yard still has a 70% holding by the regional government with no official decision regarding the sale of this holding.

For the period under review (1996 – 1998) the sector is estimated to comprise:

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It can be seen from this that partially outfitted or steel hull production is a significant part of the shipbuilding output, and accounts for around 60% of the shipbuilding activity. Additionally it should be noted that the Baltija shipyard undertakes significant steel unit fabrication for its parent and other companies.

The sector has managed to broaden its shiprepair customer base beyond the traditional domestic former Soviet Union and Eastern European markets and in securing work increasingly from Scandinavia, Western Europe and other parts of the world. We believe there is scope to broaden the customer base further.

Labour costs are very low in comparison with Western European yards which provides a cost advantage, which is however defrayed by higher levels of overhead costs and lower productivity. Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists. Shipbuilding productivity levels are considerably lower than Western European yards as measured by Compensated Gross Tons per employee year. Employment levels have remained relatively static over the period 1996 – 98 and we believe there is scope either to reduce these levels and/or to increase output. There is the physical scope to give opportunity for increased throughputs. All the yards in the sector are working below their full capacity.

Our assessment of shipbuilding technology in terms of facilities and management processes rates it at approximately 3.5 on a 5 point scale of technology levels. The repair element rates between 1 and 3. We believe there is potential for improvement dependant on strengthening managerial and organisational skills and developing a stronger base of substantive experience on a wider and more complex shiprepair/conversion workload.

For the period under review (1996 to 1998) three of the four shipyards have been profitable. The fourth yard, Klaipeda is still state owned and has made losses over the period and has seen a reduction in its workload. Whilst the 3 privatised yards appear relatively healthy with new management with forward plans, the Klaipeda yard looks much less healthy and appears uncertain about its direction.

2. OVERVIEW

2.1 SHIPBUILDING SECTOR

Publicly available statistics for shipbuilding output are available from a variety of sources. In many cases the statistics show different pictures. We have referred to the following statistics to obtain world and country-wide data for this study.

- Lloyds Register World Fleet Statistics
- Fairplay WSE
- AWES World Shipbuilding Statistics

The AWES statistics for world shipbuilding for the period 1996-1998 do not show the output of Lithuania individually. Lloyds Register Fleet Statistics show no output from Lithuania, so we have used our study data to present the following for Lithuanian shipbuilding output on a similar basis to the usual public data from these sources.

Table 2.1 : Shipbuilding Sector Market Share in CGT

Year	*Lithuania No of Completions*	*Lithuania CGT (000)*	*World Output CGT (000)*	*EU Output CGT (000)*	*% World CGT*	*% EU CGT*
1996	1	7.2	16,550.4	3,555.4	0.04	0.2
1997	-	-	16,936.8	3,225.0	-	-
1998	5	11.7	18,003.9	3,585.5	0.06	0.3
3 Year Ave 1996-1998	2.0	6.3	17,163.7	3,455.3	0.04	0.2
1999	3	13.0	17,509	3,363	0.07	0.4

Source: AWES, Lloyds Register, Fairplay and Ai analysis
Notes: 1 Complete Ships only – consistent with normal public source data
2 Includes CGT and GT information for completed ships only consistent with normal public source data

We know from our more detailed analysis of public data, that there has been some production of partially outfitted or steel hulls and/or ship sections during the period under review. We believe that the public statistics significantly understate the shipbuilding output of the yards over this time period and we have . Our visit to the Shipyards confirms this.

The table below summarises the results of our findings, using the published data and that received from the shipyards. It should be noted that the CGT values for hulls have been assessed as approximately 60% of the total ship figures and GT figures are at the ship values. The figures below are made up from the Baltija Yard for 1996 to 1998 with additional output from Western Yard in 1999.

Table2.2 : Shipbuilding Sector Size – Ai Analysis

Year	*No of Completions*		*CGT (000)*		*GT (000)*		*CGT (000)*	*GT (000)*
	Ship	*Hull*	*Ship*	*Hull*	*Ship*	*Hull*	*Total*	*Total*
1996	1	3	7.2	8.8	2.4	10.9	16.1	13.3
1997	-	2	-	6.3	-	7.8	6.3	7.8
1998	5	2	11.7	6.3	3.3	7.8	18.0	11.1
3 Year Ave			6.3	7.1	1.9	8.8	13.5	10.7
	2	1.7	47%	53%	-	-	-	-
1999	3	-	13.0	-	3,813	-	13.0	3.8

Source : Ai Analysis from Shipyards and public data.

It should be noted that much of the aforementioned 'hull' construction is undertaken for clients in Spain and Norway, and the vessels are completed in shipyards in these countries. Baltija Yard also carries out significant steel unit fabrication for its parent company in Denmark and for other companies. We were given insufficient information for steel unit fabrication to be represented in GT or CGT terms and so the figures above are understated and do not include this steel unit fabrication.

2.2 SHIPREPAIR SECTOR

There are no comprehensive sources of publicly available shiprepair statistics and we do not have any official statistics for the volume of shiprepair production. From the data provided by the shipyards we visited, we have estimated shiprepair production in the table below.

Table 2.4 : Shiprepair Sector Size

Year	*% of Total Production*	*Turnover US $ m*
1996	54.0	26.36
1997	60.6	28.78
1998	62.8	34.44
1999	42.0	20.44
3 Yr Average 1996 - 1998	59.1	29.86

Source : Ai Analysis

Based on this analysis there is a significant shiprepair activity with approximately a US $ 30 million average turnover in the 3 year period, 1996-1998.

3. SECTOR COMPOSITION

3.1 SHIPYARDS

Four Shipyards have been identified that have been active within Lithuania during the period and scope covered by this study. These are listed in the following table from which it can be seen that all of them are involved with shiprepair activities, but only two of them have been involved with shipbuilding activity during the period under consideration:

Table 3.1 : Shipyards Comprising the Sector

Shipyard Reference	*Company Name*	*Location*	*Ship Building*	*Ship Repair*
Baltija'	Baltija Shipbuilding Yard	Klaipeda	✓	✓
Klaipeda	Klaipeda Shiprepair Yard	Klaipeda		✓
Laivite	Laivite Shiprepair Yard	Klaipeda		✓
Western [2]	Western Shiprepair Yard	Klaipeda	✓	✓

Notes: 1 Baltija is now predominantly shipbuilding with only a very small % of shiprepair in 1999.
2 Western Shipyard delivered two hulls during 1999 for which some activity may relate to 1998.

4. GEOGRAPHY

All four shipyard facilities are located in the port of Klaipeda on the Baltic Sea.

5. OWNERSHIP

Three of the four shipyards are in the private sector following their privatisation in 1997,1998 and 1999. The fourth still has a 70% shareholding by the regional governments with no official plans to sell its holding. All the yards are joint stock companies. As part of the political change that took place around 1991 a mass privatisation process resulted in the issue of vouchers to citizens, giving them the right of ownership in state owned enterprises either directly or through investment vehicles. This resulted in parts of the ownership of the shipyards being transferred to employees, individuals and companies with the remaining shareholdings being held by the State Property Fund. From 1997 a major privatisation commenced to sell the state shareholdings in three of the four shipyards by international tender, details of which are given in the following section.

5.1 PRIVATISATION PROGRAMME DETAILS

The **Baltija Shipyard** was privatised in 1997 when the Danish Shipbuilding company, Odense (part of the AP Moller Group), acquired a 46.59% shareholding. The government maintained 32% and employees and other investors held 21.5%. Since then the Odense shareholding has increased to the current 97%. The company is a joint stock company whose shares are traded on the Vilnius stock exchange.

The **Western Shiprepair Yard** was privatised in 1998 by international tender, with the sale of a 59% shareholding to Western Investors, a Norwegian group with Lithuanian, Ukrainian and Norwegian interests. Employees and small investors acquired 6% and the Government retained 35%. We understand that Western Investors will purchase the remaining 35% from the Government State Property Fund sometime during 2000. Western is a joint stock company.

The **Laivite Shiprepair Yard** was privatised by auction in December 1999 and the State Property Fund retained 38.44% of the shareholding, the management and employees had 37%, the remainder being held by other Lithuanian companies and interests. In the middle of 2000 the Lithuanian state sold its remaining shareholding to the management and other Lithuanian interests. Laivite Shiprepair Yard is a joint stock company.

Klaipeda Shiprepair Yard is a joint stock company with the Klaipeda regional government owning 70% of the shares. 16% is owned by a Lithuanian Foundry company and the remaining 14% owned by employees and small shareholders. There appears to be no official decision regarding the sale of the Klaipeda regional government's 70% holding.

5.2 CURRENT OWNERSHIP STATUS

The following table shows the status of ownership of the Lithuanian Shipyards as at August 2000, showing which have been through the privatisation process and the remaining state ownership.

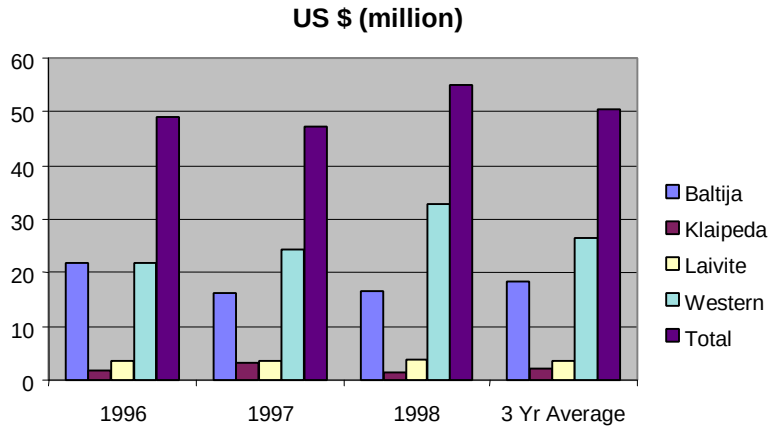
Table 5.1 : Shipyard Owner Status

Shipyard	***Status***	***Date of Privatisation***	***State Holding***	***Domestic Investor***	***Foreign Investor***
Baltija	Privatised	1997	Nil	Other 3%	Danish Odense 97%
Klaipeda	Not offered for privatisation	-	70%	Company, employees and others	Nil
Laivite	Privatised	1999	Nil	Management, employees and others	Nil
Western	Privatised	1998	35%	Consortium	Norwegian Ukrainian

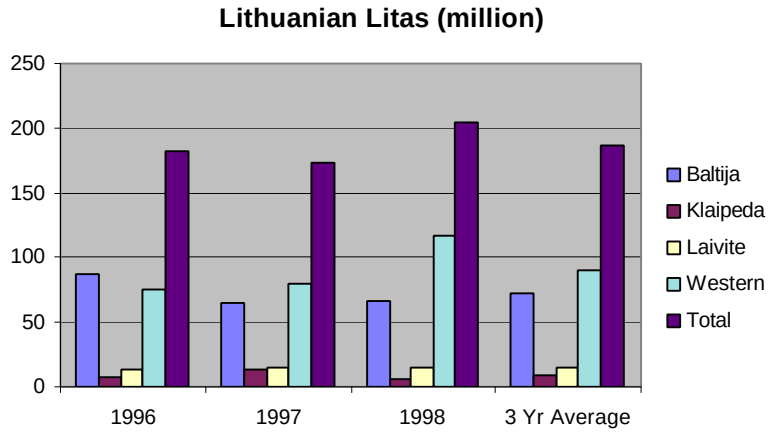
6. OUTPUT AND ECONOMIC ACTIVITY DETAILS

6.1 TURNOVER

The turnover of Lithuanian shipyards over the 1996-1998 reference period as reported by the yards, averages just over US $ 50 million. The turnover figures are dominated by the Baltija Shipbuilding yard and Western Shiprepair Yard. The turnover in US dollars is shown on the following graph.



Turnover expressed in local currency, the Lithuanian Lita, is shown on the graph below. The exchange rate has stayed stable over the reference period as the Lita is pegged to the US Dollar.



Some of the yards are equipped for both shipbuilding and shiprepair, however in practice the shiprepair activity in a shipbuilding yard may account for only a minority aspect of the business. The following table highlights the importance of shiprepair and conversion to the primary activity of individual shipyards during the period under review.

Table 6.1 : Shiprepair Sub-Sector

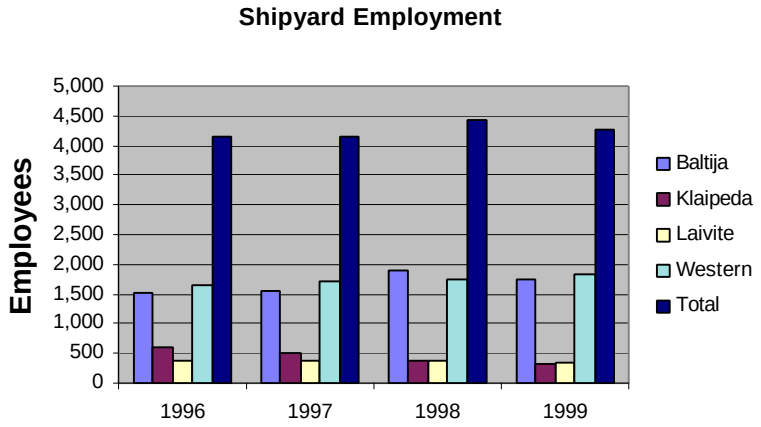
Shipyard	Shiprepair	
	Activity	Facilities
Baltija	Minority activity (5% t/o)	Combined yard
Klaipeda	**Repair Only**	**Repair Yard**
Laivite	**Repair only**	**Repair yard**
Western'	**Repair Only**	**Repair yard**

Note: 1 Western have completed 2 fishing vessel hulls during 1999

Exact information is not available on the spilt of turnover between shipbuilding, repair and other activities, however it is estimated that the shiprepair activity represents approximately 60% of turnover during the 3 year reference period.

6.2 EMPLOYMENT

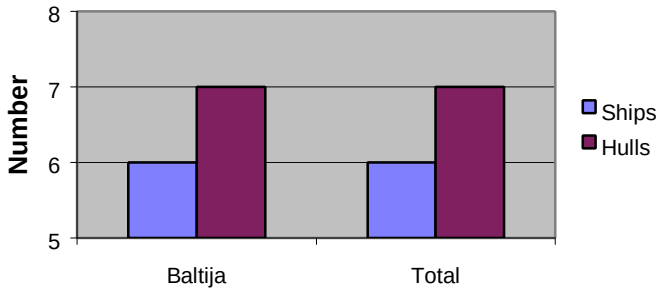
Shipyard employment averaged approximately 4,200 during the 3 year period 1996 to 1998. It can be seen that employment levels have remained relatively stable in the sector .



6.3 OUTPUT

The shipbuilding output of the Shipyards, in terms of ships delivered/completed during the period 1996-1998, is shown graphically below. Output is categorised between fully outfitted 'Ships' and 'Hulls'. The latter represents partially outfitted hulls or steel hulls constructed in Lithuania for completion at yards in other countries.

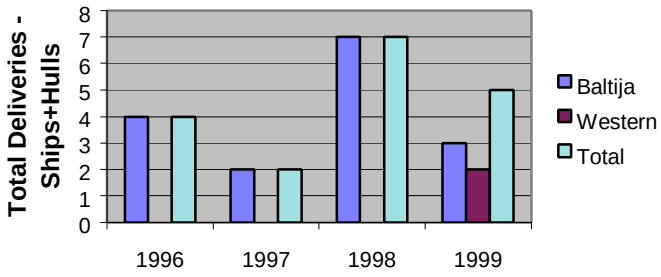
Shipbuilding Output 1996 - 98



It can be seen from the graph that the shipbuilding activity over the period 1996-1998 was concentrated solely at the Baltija Shipyard. Western Shipyard however completed 2 small hulls during 1999. Additional to the completed ships and hulls from Baltija, this shipyard has completed an increasing workload of fabricated steel units for ships being built by its Danish parent company Odense.

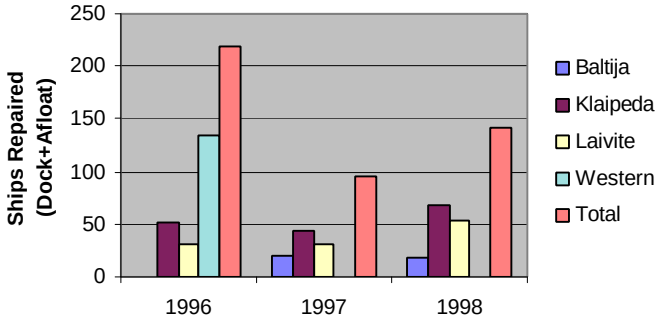
The following graph shows the delivery of ships/hulls throughout the period 1996-1999 by yard showing the entry of Western Shiprepair into shipbuilding activity.

Shipbuilding Output 1996 - 99



The shiprepair workload of the Shipyards, in terms of ships stemmed, during the period 1996-1998 is shown in the following graph.

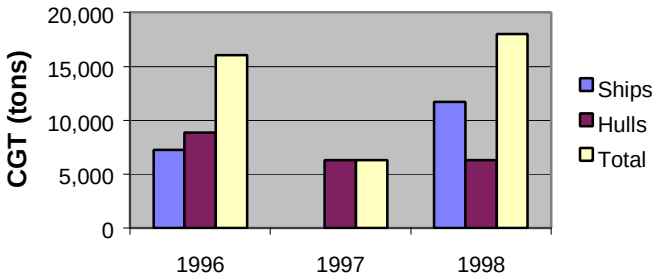
Shiprepair Output 1996 - 98



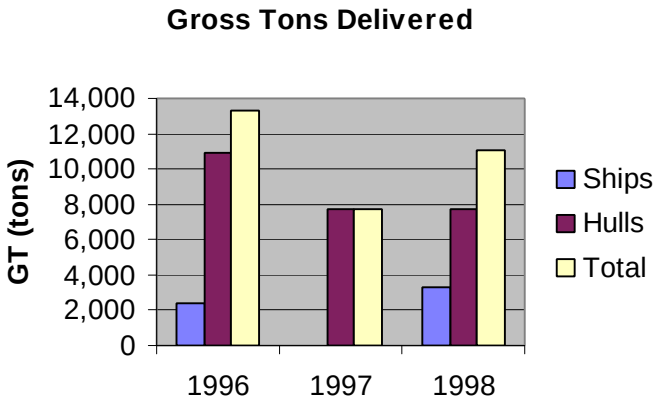
6.4 WORKLOAD

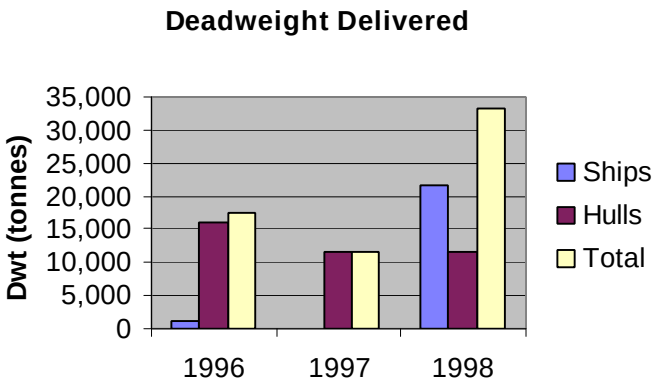
The shipbuilding output of the Shipyards, in terms of Compensated Gross Tons (CGT) delivered/completed during the period 1996-1998, is shown in the graph below. Shipbuilding completions over the period were concentrated solely at the Baltija Shipbuilding Yard. The column headed 'Hulls' represents an assessment of the CGT workload of partially outfitted vessels or steel hulls constructed at the Shipyards for completion at yards in other countries. The significant workload of fabricated steel units at Baltija (for its parent company) has not been included in the CGT calculation due to lack of information. To that context workload is understated.

Compensated Gross Tons Delivered



The estimated shipbuilding output of the Lithuanian Shipyards in Gross Tons (GT) and Deadweight Tonnes are shown on the graphs below:





We have been unable to obtain any detailed or comprehensive quantification of ship repair output in terms of dock days or total yard days for the shiprepair yards for the reference period. The information that was available is shown at Table 13.10, but is substantially incomplete.

7. SECTOR DETAILS

7.1 SECTOR SUB-DIVISION

The Lithuanian Shipyard sector is concerned with commercial shipbuilding and shiprepair and there is no military work carried out. The sector involves river, coastal / short sea and ocean going vessels. The table below summarises the activity of the individual yards.

Table 7.1 : Shipyard Activity

	Shipbuilding			Shiprepair/Conversion		
		Commercial			Commercial	
Shipyard	**Military**	**River**	**Ocean**	**Military**	**River**	**Ocean**
Baltija	-	✓	✓	-	✓	✓
Klaipeda	-	-	-	-	✓	✓
Laivite	-	-	-	-	✓	✓
Western	-	-	✓	-	-	✓

Some of the vessels operating on rivers may have both river and sea going capability, although some are clearly intended only for river operation.

7.2 YARD CAPACITY

The prime Shipyard facilities comprise a mix of floating docks, shipbuilding berths and a ship transfer system. Table 7.2 summarises these facilities. In total we identified 7 floating docks and 7 building/repair berths.

Table 7.2 : Shipyard Capacity

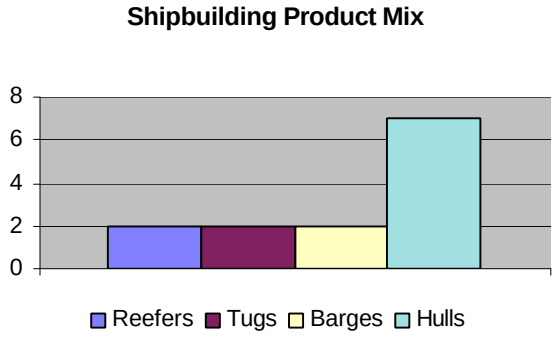
	Docks /Berths			Max Ship Dwt		Throughput	
Shipyard	**Dry Docks**	**Floating Docks**	**Berths**	**Build**	**Repair**	**Steel tonnes**	**CGT**
Baltija'	-	1	5	12,000	12,000	25,000	
Klaipeda [2]	-	2	2	-	14,500	-	-
Laivite	-	1	-	-	25,000	-	-
Western	-	3	-		60,000		

Notes: 1 Berths linked to a ship transfer system
2 Berths are marine railways

The largest size of the vessel which can be built in Lithuania is approximately 12,000 Dwt at the Baltija Shipyard. The largest size of vessel that can be docked is approximately 60,000 Dwt at the Western Shiprepair Yard.

7.3 DELIVERIES BY VESSEL TYPE

Shipbuilding production during the three year reference period has been solely from the Baltija Shipbuilding Yard, and has been concentrated on reefers, tugs and barges, together with some building of general cargo ship hulls for completion at other shipyards. This is represented on the graph below.



8. MARKET AND COMMERCIAL ENVIRONMENT

8.1 SUPPLIER PROFILES

As far as shipbuilding activity is concerned equipment is generally sourced from the international market in accordance with the specification requirements of the owners or they receive owner-supplied items. The level of manufacturing self-sufficiency is generally higher than in Western Europe with many small items such as outfit steel, joinery and small engineering items being made in-house. It is normal for such functions as sheet metal, pipework, joinery and outfit steel manufacture to be undertaken in-house. There is also a network of domestic/local supply companies for a range of components.

In terms of raw materials steel is generally bought from the Ukraine and Poland or on the international market. Paints are bought in accordance with the owner's requirements from internationally recognised paint manufacturers.

The Shiprepair Yards appear to procure equipment on the international or domestic market according to the owner's specification.

8.2 CUSTOMER PROFILES

In terms of shipbuilding activity the Baltija Shipyard has had a client base since 1996 as shown in the following table.

Table 8.1 : Shipbuilding Client Base

Baltija Shipbuilding Yard
Spain
Russia
Denmark

At Baltija the fabrication of significant steel units with some outfit for ships to be completed at its parent company, Odense (Denmark) is becoming an increasing activity. Western Shiprepair Yard completed two fishing vessel hulls in 1999 for Norwegian clients.

In terms of shiprepair, the customer base is much more diverse given the greater number of projects. The sector comprises a mix of domestic and international customers. The shipyards in this sector have historically had a customer base which has been predominantly domestic or from the former Soviet Union, Eastern and Central Europe. Since the political changes in the early 1990's, the repair yards have managed to broaden there customer base and secure an increasing number of customers from Scandinavia, Western Europe and the rest of the World. Klaipeda and Laivite Shiprepair Yards still however secure approximately 70% of their work from local, former Soviet Union, and Eastern European customers, with Scandinavia representing up to 20%. Western Shiprepair Yard has managed to make good progress in the Scandinavian market with Norwegian vessels representing 50% of the yards workload in 1999.

8.3 ORDERBOOK

We are aware, from published data, of the following shipbuidling orderbook for the year 2000, comprising only vessels for the Baltija yard.

Table 8.2 : Shipbuilding Orderbook

Ship Type	*No of Vessels*
Offshore	2
Total	**7**

We are also aware that Baltija has an ongoing workload of fabricated steel units for delivery to its parent company, Odense.

8.4 SHIP PRICES

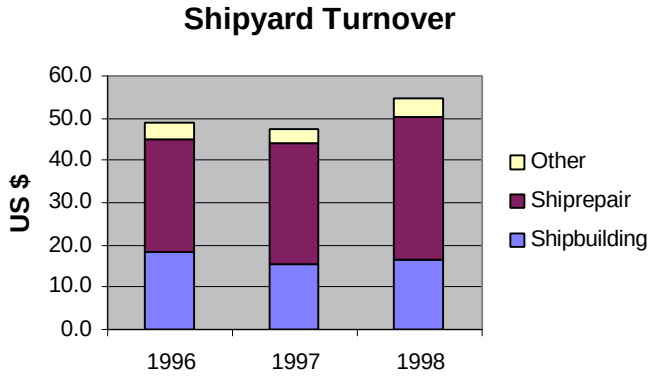
We have no ship prices provided to us by Baltija or Western Shipyards, and there is no information available from public sources. We do however know that the operating cost base in Lithuania is low and we believe that competitive prices can be offered.

9. FINANCIAL PERFORMANCE

The following financial information is as provided to us by the shipyards and we believe it to be reasonably accurate.

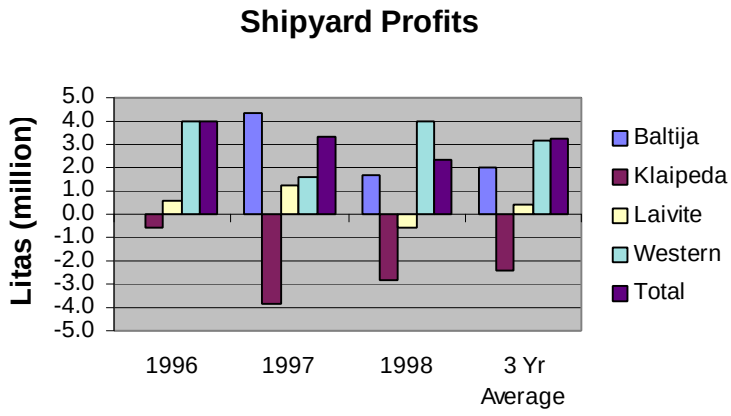
9.1 TURNOVER

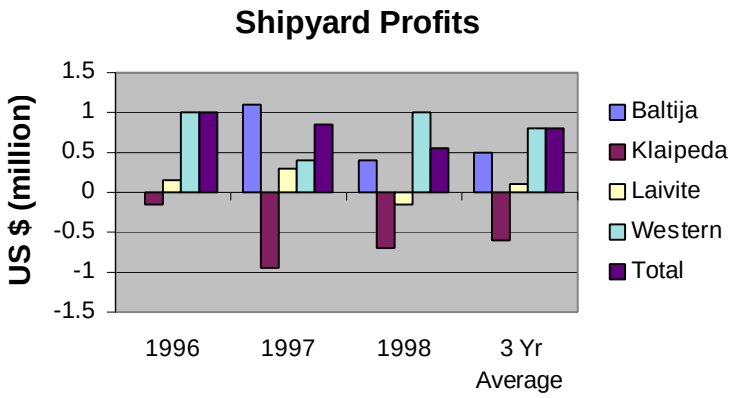
The turnover of the shipyards in Lithuania has been estimated at around an average of US$ 50 million over the three-year reference period 1996-1998. The following graph shows the split between shipbuilding, repair and other activities across the sector.



9.2 PROFITABILITY

The profitability of the Lithuanian Shipyard sector is shown in the following graphs. It can be seen that the predominately state owned Klaipeda shipyard has made loses over the three-year period. The other three shipyards have made relatively modest profits, except for a loss recorded at Laivite Shipyard in 1998. Klaipeda, Laivite and Western Yards recorded losses in 1999 also.





Looking to the future, with three of the yards under private ownership and with continued currency stability, three yards will operate in a commercial environment that reflects that of Western European Yards to a greater extent.

It is difficult to project forward profit performance into the future, but the stability of new ownership and purpose at the three privatised yards should give them a reasonable chance of ongoing profitability. The future profitability of the state owned Klaipeda Shipyard is not possible to predict.

9.3 SOURCES OF FUNDING

We were unable to obtain the necessary detailed financial information to comment on sources of funding. Specific funding for shipbuilding projects can be problematic. However this problem, if any, at Baltija will be eased by the fact that a significant proportion of their shipbuilding workload is fabrication of ship units for its parent company in Denmark and hulls for completion in other shipyards, which shipyards are the main contractor.

9.4 INVESTMENT

The shipyards in the sector have adequate primary facilities based on previous investments and development programmes, requiring some maintenance and repair spend, but with, we believe, still useful working life capability.

From our visits to the shipyards the priority seemed to be the rationalisation of the facilities, improvements in productivity, management/administration restructuring and cultural change. A limited investment in equipment seems to have a higher priority than significant capital investment proposals. In an environment of low labour costs, the economic case for capital investment in new equipment is quite tough and payback in terms of improved performance against capital outlay may be difficult to justify.

We understand that on privatisation the Lithuanian State Property fund may have sought commitments from the three privatised yards on capital investment and employment guarantees which may not fully align with the commercial realities of the sector. We were not able to establish if binding guarantees were obtained.

10. GOVERNMENT SUPPORT

10.1 OPERATING SUBSIDY

In general terms the Lithuanian Shipyards do not appear to have access to operating subsidies for either shipbuilding or shiprepair activities. The shipyards all clearly stated that they receive no government or other subsidies. Only Baltija shipyard said that they had historically received some tax concessions in 1993-1994, about which we have no details.

10.2 SUPPORT OF LOSSES

For enterprises under state ownership, government support can exist in the form of supporting loss-making industries. It is a difficult area to assess, in so far as losses per se do not indicate government support, if the balance sheet and general commercial status of the enterprise can support these losses. If however, creditors or banks allow an unprofitable enterprise to continue trading (that otherwise they would not) on the grounds that the state is the owner or majority owner, then it can be construed that the enterprise is being supported by government.

The Klaipeda Shiprepair Yard which is 70% owned by Klaipeda Regional Government sustained total losses of US$ 1.8 million over the review period 1996-1998 and continued to make a loss in 1999. We were unable to ascertain the strengths of the company's balance sheet to support these losses, or the extent to which the major shareholder may have supported them, if at all.

10.3 DEBT RESCHEDULING AND WRITE-OFF

The three privatised shipyards reported to us that there was no dept rescheduling or write off at the time of their privatisation. This was confirmed by the privatisation agency, the State Property Fund.

Klaipeda Shiprepair Yard say that they are presently in discussion with the state authorities concerning outstanding debts, for which they believe they are being unfairly held responsible. They did not divulge the nature nor the size of these debts, but said that they expected to resolve the situation with the state authorities.

10.4 OTHER SUPPORT AND USE OF AID

The shipyards reported to us that they received no other support or aid.

Klaipeda Shiprepair Yard reported discussions with the local authorities regarding sale of land and reduction in rates, but we were unable to ascertain if this was normal operations cost-reductions or indirect support.

10.5 PROTECTED CUSTOMER BASE

Baltija Shipyard has built 7 steel, partially outfitted hulls during 1996-1998 for completion at other shipyards. The customer for the completed ships has been the Lithuanian Shipping Company. These hulls represent approximately 53% of the Compensated Gross Tonnage delivered by the shipyard over the period.

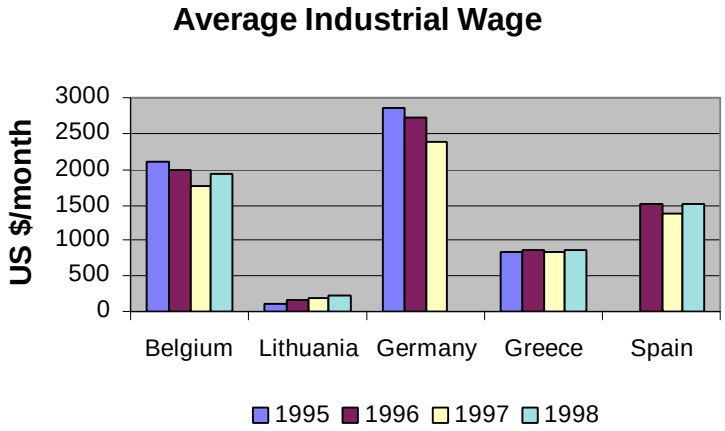
There was no military work carried out in the four shipyards.

11. COMPETITIVENESS

11.1 COSTS

The prime labour costs of the shipyards are low at around US$ 0.80 – 1.60 / hour. At this level it is highly cost competitive on a simple time-based comparison with Western European and other developed shipbuilding economies. In general this reflects the lower general level of wages in the country, although shipyard wages are higher than in some other industries.

To demonstrate the general level of wages we have shown below the average monthly industrial wage (in US$ terms) for Lithuania in comparison with four other western and southern European countries for the period 1995-1998.



However this prime labour cost advantage is offset by lower productivity in the shipbuilding yards and higher indirect manning levels and overheads. Since privatisation we believe the productivity, manning levels and overheads have and are being gradually addressed. Where guarantees may have been given to maintain employment levels, this can only be achieved cost effectively through real increases in workload over and above direct productivity improvement.

In summary, the prime labour cost is low and provides cost advantage, however it is defrayed by higher levels of indirect workers and overhead costs, and lower productivity.

11.2 TECHNOLOGICAL

The technology of the shipbuilding yards has been assessed against the Appledore technology audit datum, which is expressed in terms of Shipyard development 'generations'. This 5 point scale grades yards according to their facilities and management processes and has been widely accepted as a simple measure of technological advancement. The scale comprises:

Table 11.1 : Shipbuilding Technology

Level	*Description*
1	Reflects typical practice of the early 1960s – small cranage, multiple open berths, post launch outfitting, little mechanisation. Manual operating systems
2	Reflects yard modernisation of the late 1960s/ early 1970s. Fewer berths or dock, larger cranes, some mechanisation. Some computerised systems
3	Good practice of the late 1970s, new/fully redeveloped yards, large capacity cranes, some weather protection at dock or single construction area. High degree of mechanisation and use of computers.
4	Technology advances of the 1980s. Generally single dock, good weather protection, extensive early outfitting and fully developed operating systems.
5	State of the art of the 1990s, with automation, integration of operating systems by CAD. Computer aided material control and Quality Assurance.

The shipbuilding facilities in Lithuania have been assessed with reference to the Baltija Shipyard, the only significant shipbuilding facility. This facility is generally of a level 3.5 technology level. The world put it on par with many yards throughout the developed world. Planning, materials, control and management information systems may generally be as advanced, however Baltija is gradually adopting similar advanced procedures to its parent company Odense.

In terms of shiprepair, no similar widely accepted comparison scale exists, the production, facility and organisational related aspects of shiprepair being less definitive. In facilities terms shiprepair technology tends to be predominantly about the nature of docking facilities, the painting and blasting processes and the diversity of other tasks the yard is equipped to undertake. In management terms, the technological aspects of shiprepair relate to the scale and complexity of shiprepair tasks that can be undertaken, the contract management and invoicing control and the speed of turn-around achievable.

Table 11.2 : Shiprepair Facilities.

	Afloat	**Floating Dock**	**Dry Dock/ Ship Lift**	**Covered Repair Berth**
Baltija	✓	✓	✓ [1]	✓ [1]
Klaipeda	✓	✓	✓	
Laivite	✓	✓		
Western	✓	✓		

Notes: 1 Currently used for shipbuilding

Table 11.2, summarises the nature of the basic shiprepair facilities at each yard. Whilst this is by no means definitive, it does represent a basic physical production platform against which the repair technology at each yard is developed.

In an attempt to offer a broader assessment of shiprepair technology we have assessed the yards against an equivalent 5 point scale to that used for shipbuilding. This scale is assumed to represent the full spectrum of shiprepair technology and practice, with Level 1 representing basic shiprepair operation and Level 5 representing current best practice. The following table indicates some of the key characteristics of these two extremes.

Table 11.3 : Shiprepair Technology

Level	*Description*
1	Typical practice of the early 1960s with limited ship docking or recovery capacity or a yard in which afloat work only is possible. Small capacity cranage and limited supporting workshops and services capability. Limited planning/project management and organisational skills resulting in longer repair durations. Poor general level of supporting industrial infrastructure. Not capable of undertaking more complex repair and conversion projects.
5	Multiple shipdocking/recovery capacity with adequate associated wet berths. Modern high performance cranage with good quality workshops and extensive services capability. Advanced planning/project management ability and high organisation and contractual skills resulting in short repair durations. Excellent general level of supporting industrial infrastructure. Capable of undertaking the most complex repair and conversion projects.

The operational technology employed within the Lithuanian shiprepair yards is considered to cover a spectrum from Level 1 in the smallest facilities up to Level 3 in the largest yard. Potential for improvement would be dependent upon strengthening the management and organisational skills and in developing a stronger base in conversion work and substantive repair work on more complex vessel types.

11.3 PRODUCT RELATED

In shipbuilding terms the ship types built during recent years has comprised of general cargo vessels, reefers, barges, tugs, fishing vessels and offshore vessels (anchor handling, tug, supply vessels -, AHTS). In terms of repair, a greater diversity of ship types is covered.

For the purpose of summary, ship types have been divided into 4 categories for commercial vessel types reflecting varying levels of product complexity. Additionally naval/military vessels have been classed separately in a single category. The experience base of the Lithuanian shipyards in terms of vessel complexity and sophistication over recent years is summarised in the following table.

Table 11.4 Product Experience

Activity	*Ship Types*				
	Small [1]	*Basic Cargo* [2]	*Specialist Cargo* [3]	*Passenger*	*Military*
Shipbuilding	✓		✓		
Hull building	✓	✓			
Conversion	✓	✓		✓	
Repair	✓	✓	✓	✓	

Notes: 1 Fishing vessels, tugs, river barges, dredgers, offshore patrol
2 General cargo, bulk carrier, oil tankers, container
3 Reefer, LNG, LPG, Chemical tankers, Ro-Ro etc
4 Passenger ferries, cruise ships, leisure vessels

Size is a major contributor to complexity, especially in shipbuilding activity, where the hull form and the density of outfit and engineering installation may be significantly increases the complexity of smaller vessels. This has been reflected in the weighting given to the compensation factors used to calculate the CGT work content measure for commercial vessels.

As an additional measure of product related technology, we have calculated the weighted average compensation factor for all rated vessels delivered within the three-year reference period. The Lithuanian yard workload average factor is 1.25 excluding vessels for which there is no known or estimated CGT value.

Comparative factors for various other European shipbuilding countries are shown in the following table, from which it can be seen that Lithuania is of relatively high complexity level. The factor of 1.25 is relatively high because of the completion of two reefers ships, out of a total of 11 ships and hulls. The factor excluding the two reefers is 0.95.

Table 11.5 : Shipbuilding Average CGT Compensation Factors

Country	*Ave CGT factor*	*Country*	*Ave CGT factor*
Latvia	1.84	Italy	0.95
Norway	1.76	United Kingdom	0.94
Slovakia	1.67	Sweden	0.93
Netherlands	1.45	Spain	0.87
Lithuania	**1.25**	Romania	0.84
France	1.19	Poland	0.82
Finland	1.03	Bulgaria	0.78
Ukraine	0.96	Croatia	0.77
Germany	0.95	Denmark	0.77

Source: Ai collated data for study countries, AWES data for other countries

11.4 PRODUCTIVITY

Productivity measured crudely by CGT/employee year, has been calculated for the Baltija Shipyard which is the only yard with shipbuilding activity over the review period. The CGT is calculated from the completed ship and hull workload at Baltija. We are aware of steel unit fabrication being carried out for the parent company, Odense, but we have not been provided with any information about this workload over the reference period and the CGT calculation does not include it. To this extent the CGT over the reference period will be understated. During our visit to the shipyard we observed that the activity on fabrication of units for other yards was very significant proportion of the total activity.

The resultant measure for Baltija averages approximately 9 CGT/employee year for the three-year reference period, but for the reason explained above, we believe this figure to be understated.

Nevertheless, the shipbuilding productivity levels are generally lower than that of the EU yards, where crude productivity averaged around 50 CGT/employee year. Inevitably these calculations are crude, however it can be assessed that productivity levels are an order of magnitude lower in Lithuania.

Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists.

11.5 ENVIRONMENTAL HEALTH & SAFETY

Like most shipyards around the world, the Lithuanian yards will suffer from accumulated contamination of the site due to the industrial processes undertaken over time. In terms of their on-going processes there are a range of activities in use that are unlikely to comply fully with EU environmental legislation. The situation varies from yard from yard, however it is believed that the general environmental control is lower than in the larger EU shipyards.

The levels of health and safety precautions are visibly lower than in most EU shipyards, with only limited evidence of the use of personal protective equipment by employees and management. However we believe the Scandinavian involvement at the Baltija and Western yards has improved environmental and safety and health precautions in these yards.

12. STRUCTURAL ADJUSTMENTS AND ASSISTANCE INITIATIVES

12.1 EU ACCESSION REQUIREMENTS

Lithuania does not appear to operate a scheme to provide operational subsidies for shipbuilding or shiprepair and we have not identified any other form of aid to shipyards over the period of 1996-1998 that conflicts with EU requirements. However there have been losses at the only remaining state owned yard, Klaipeda Shiprepair Yard. Klaipeda has made losses over the reference period and in 1999. We were not provided with sufficient information to assess if the company's balance sheet was able to support these losses and we believe there is no plan at present for the Klaipeda Regional Government to relinquish its 70% shareholding.

In terms of environmental and health and safety aspects, we believe there is a need for improvement in both areas in order to satisfy current regulations and standards. The situation does vary at individual yards. Where yards have been privatised to foreign investors, there has generally been a commitment to improve the environment and safety aspects and at Baltija and Western Yards some improvements are evident. Assistance with environmental and safety audits would help facilitate and prioritise improvements, particularly at domestically owned yards.

12.2 ASSISTANCE MEASURES

The yards in Lithuania, that are not under foreign ownership, suffer disadvantage and problems with the availability and cost of ship and other finance compared to Western European Yards.

The problem is mainly one of transition, until such time as the yards have been able to establish their own financial 'track record' with international banks and until the Lithuanian banking sector is better able to service the needs of the industry. Although two of the yards have major foreign shareholdings, the long term opportunities for the sector would benefit from a scheme to provide competitively priced shipbuilding finance, working capital and investment capital during an agreed transition period.

There is a need to improve environmental and health and safety conditions at most of the yards. It is considered that a programme of assistance to yards to audit their current position in relation to EU requirements, would help to clarify the extent and nature of the improvement required and provide an effective basis against which to plan and monitor improvements.

13. NUMERICAL DATA TABLES

13.1 FINANCIAL

Table 13.1 : Shipyard Turnover

Shipyard	1996		1997		1998		1999	
	'Litas mill	US $ mill	'Litas mill	US $ mill	'Litas mill	US $ mill	'Litas mill	US $ mill
Baltija	87.0	21.8	65.5	16.4	66.7	16.7	83.6	20.9
Klaipeda	6.7	1.7	13.0	3.2	5.6	1.4	3.3	0.8
Laivite	13.5	3.4	14.5	3.6	15.1	3.8	9.1	2.3
Western	75.4	22.0	79.8	24.2	116.6	33.0	100.8	25.2
Total	182.6	48.9	172.8	47.4	204.0	54.9	196.8	49.2

Notes: ' Currency Lithuania.

Table 13.2 : Shipyard Profitability

Ship Yard	1996		1997		1998		1999	
	'Litas mill	US $ mill	'Litas mill	US $ mill	'Litas mill	US $ mill	'Litas mill	US $ mill
Baltija			4.3	1.1	1.7	0.4	7.0	1.7
Klaipeda	-0.6	-0.15	-3.8	-0.95	-2.8	-0.7	-1.4	-0.35
Laivite	0.6	0.15	1.25	0.31	-0.6	-0.16	-4.7	-1.2
Western	4.0	1.0	1.6	0.4	4.0	1.0	-17.6	-4.4
Total	4.0	1.0	3.35	0.86	2.3	0.54	-16.7	-4.25

Notes: ' Currency Lithuania

13.2 EMPLOYMENT

Table 13.3 : Shipyard Employment

Shipyard	1996	1997	1998	1999
	Employees	Employees	Employees	Employees
Baltija	1,519	1,562	1,893	1,740
Klaipeda	600	502	394	332
Laivite	380	374	391	348
Western	1,640	1,700	1,750	1,851
Total	4,139	4,138	4,428	4,271

13.3 SHIPBUILDING OUTPUT

Table 13.4 : Shipbuilding Output – Numbers of Vessels

Shipyard	1996			1997			1998		
	Ships	Hulls	Total	Ships	Hulls	Total	Ships	Hulls	Total
Baltija	1	3	4	-	2	2	5	2	7
Klaipeda	-	-	-	-	-	-	-	-	-
Laivite	-	-	-	-	-	-	-	-	-
Western [1]	-	-	-	-	-	-	-	-	-
Total	1	3	4	-	2	2	5	2	7

Notes: 1 Western Shipyard delivered two hulls during 1999 for which some activity will relate to 1998.

Appledore *international*

Table 13.5 : Shipbuilding Output in Compensated Gross Tons

	1996			1997			1998		
Shipyard	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**
Baltija	7,242	8,813	16,055	-	6,308	6,308	11,682	6,308	17,990
Klaipeda	-	-	-	-	-	-	-	-	-
Laivite	-	-	-	-	-	-	-	-	-
Western	-	-	-	-	-	-	-	-	-
Total	**7,242**	**8,813**	**16,055**	**-**	**6,308**	**6,308**	**11,682**	**6,308**	**17,990**

Note: In the absence of specific information hulls have been assumed to represent 60% of total vessel CGT

Table 13.6 : Shipbuilding Output in Gross Tons

	1996			1997			1998		
Shipyard	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**
Baltija	2,414	10,879	13,293	-	7,786	7,786	3,290	7,786	11,076
Klaipeda	-	-	-	-	-	-	-	-	-
Laivite	-	-	-	-	-	-	-	-	-
Western	-	-	-	-	-	-	-	-	-
Total	**2,414**	**10,879**	**13,293**	**-**	**7,786**	**7,786**	**3,290**	**7,786**	**11,076**

Note: Hulls included at full GT value

Table 13.7 : Shipbuilding Output in Deadweight Tonnes

	1996			1997			1998		
Shipyard	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**
Baltija	1,258	16,127	17,385	-	11,685	11,685	21,583	11,672	33,255
Klaipeda	-	-	-	-	-	-	-	-	-
Laivite	-	-	-	-	-	-	-	-	-
Western	-	-	-	-	-	-	-	-	-
Total	1,258	16,127	17,385	-	11,685	11,685	21,583	11,672	33,255

Note: Hulls are included at full deadweight values

Table 13.8 : Shipbuilding Output by Vessel Type

Ship Type	1996		1997		1998		1999	
	Ships	**Hulls**	**Ships**	**Hulls**	**Ships**	**Hulls**	**Ships**	**Hulls**
General cargo ships	-	3	-	2	-	2	-	-
Reefers	1	-	-	-	1	-	-	-
Fishing vessels	-	-	-	-	-	-	-	2
Offshore vessels	-	-	-	-	-	-	2	-
Tugs	-	-	-	-	2	-	1	-
Barges	-	-	-	-	2	-	-	-
Total	**1**	**3**	**-**	**2**	**5**	**2**	**3**	**2**

13.4 SHIPREPAIR WORKLOADS

Table 13.9: Shiprepair Workload – Ships Stemmed

	1996			1997			1998		
Shipyard	***Docked***	***Afloat***	***Total***	***Docked***	***Afloat***	***Total***	***Docked***	***Afloat***	***Total***
Baltija '				14	6	20	14	5	19
Klaipeda	35	17	52	20	24	44	49	19	68
Laivite	14	18	32	13	18	31	11	43	54
Western [2]	-	-	135	-	-	-	-	-	-
Total			219			95			141

Notes: 1 No information available for 1996
2 No information provided for 1997 and 1998

Table 13.10 : Shiprepair Workload in Days

	1996		1997		1998	
Shipyard	***Docked***	***Total***	***Docked***	***Total***	***Docked***	***Total***
Baltija Klaipeda Laivite Western	274		250		282	
Total						

Notes: 1 No information available from Baltija, Laivite and Western

13.5 ECONOMIC INDICATORS

Table 13.11 : Economic Indicators

Indicator		***1995***	***1996***	***1997***	***1998***	***1999***
Exchange Rate	Litas /$	4.0	4.0	4.0	4.0	4.0
Average Industrial Wage	$/month	122	167	206	233	-
Unemployment Rate	%	7.3	6.2	6.7	6.9	10.0
Wage Inflation	% y-o-y	43.5	36.0	24.6	19.1	6.0
Consumer Prices	% y-o-y	39.5	24.7	8.8	5.1	0.8
Industrial Gross Output	% y-o-y	0.9	3.5	8.0	7.0	-
Productivity in Industry	% y-o-y	12.0	8.5	7.6	7.9	-

Notes: % y-o-y denotes percentage yearly change