



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 01.10.1997
COM(97) 470 final

COMMUNICATION FROM THE COMMISSION

TO THE COUNCIL, THE EUROPEAN PARLIAMENT,
THE ECONOMIC AND SOCIAL COMMITTEE
AND THE COMMITTEE OF THE REGIONS

**TOWARDS A NEW
SHIPBUILDING POLICY**

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I. Introduction

The present regime on state aids for the European shipbuilding industry, laid down in the Seventh Directive on Aid to Shipbuilding ⁽¹⁾, will expire at the end of 1997. To present its views on the policy to be followed after this date the Commission transmitted, in April 1997, the working document "Shipbuilding Policy - Options for the Future" ⁽²⁾ to the Council, indicating its intention to pursue a new policy approach towards shipbuilding.

The Council discussed the working document at its meeting of 24 April 1997 and concluded that it is in favour of a new policy regime for shipbuilding; this could be accompanied by an extension of the Seventh Directive until 31.12.98 on condition that the Seventh Directive lapses automatically as soon as the OECD Agreement enters into force or as soon as the new shipbuilding regime is adopted. The Commission, at this Council meeting, committed itself to present the proposal for the new regime by the end of September 1997.

The Commission believes that the implementation of the OECD Agreement Respecting Normal Competitive Conditions in the Commercial Shipbuilding and Repair Industry of 21 December 1994 would be the best option to enable Community shipyards to compete under fair trading conditions. The Commission still hopes that the agreement will enter into force soon. The Union however has to be prepared for the case that this does not happen. Therefore this Communication deals with the case that the OECD Agreement will not come into force.

The aim of the policy developed in this Communication is to devote efforts towards improving the competitiveness of the industry within a period of five years commencing from the coming into force of the new regime. After that period shipbuilding will be subject to exactly the same rules as all other industries. The granting of operating aid shall be ended on 31 December 2000.

Together with this Communication the Commission is submitting to the Council a proposal for a prolongation of the existing rules on state aids to shipbuilding until 31 December 1998 and a new Council Regulation on aid to Shipbuilding, reflecting the considerations laid down in the present communication.

The present document assesses the effects of European shipbuilding policy in the past, the competitive situation of the shipbuilding sector today and the challenges for shipbuilding in Europe for the future. It examines under what conditions Community shipbuilders can retain and improve a competitive position on the world market and thereby create one of the conditions to maintain employment in the European Union. It identifies best practices for shipbuilders in Europe and elsewhere. It sets out how industry, Member States and the European Union through its industrial competitiveness policy, focusing on research policy, on trade and competition policy, can contribute to this end.

⁽¹⁾ 90/684/EEC, OJ L380, 31.12.90, p. 27

⁽²⁾ SEC(97)567 final

II. Existing State Aid Rules

The seventh Directive maintains the policy established by the sixth Directive⁽³⁾, adopted in 1986 against a background of abnormally difficult market conditions, caused by a declining demand for ships and a rapid increase in shipbuilding capacities, particularly in the Far East, leading to a significant imbalance between supply and demand and depressed prices. The main aim of the directive has been:

- to safeguard the Community shipbuilding industry by providing a defensive instrument against perceived unfair competition through injurious pricing below costs, thereby maintaining a sufficient level of Community shipbuilding activity in those market segments where the Community could remain competitive under normal market conditions, such as less labour-intensive, technologically complex specialised ships; and to encourage the necessary structural adjustment of EC shipbuilding toward these directions;
- to provide, in accordance with the aims of the internal market, a level playing field so that intra-Community competition in shipbuilding is carried out on a fair, transparent and equitable basis.

Under the Directive operating aid for shipbuilding and ship conversions, (but not ship repair) may be granted, up to a common maximum aid ceiling which reflects the difference between the costs of the most competitive Community yards and market prices of their main international competitors, with particular regard to those market segments in which Community shipbuilders remain relatively most competitive. In accordance with the principle of degressivity established by the Directive, the ceiling, which was 28% in 1987, has been progressively reduced to 9% currently (4.5% for smaller vessels and conversions). The only operating aids exempted from the ceiling are credit facilities complying with the 1981 OECD Understanding on Export Credits for Ships and aid granted as development assistance to developing countries.

The Directive also lays down rules for investment aids within the framework of restructuring which must be linked to a restructuring plan which does not involve any increase in the yard's shipbuilding capacity or which must be directly linked to a corresponding irreversible reduction in capacity of other yards in the Member State concerned; aid for closures on condition that the resulting capacity reduction is of a genuine and irreversible nature (with the facilities having to remain closed for not less than five years; and not being reopened within a further five years after the five years, i.e. for a total of ten years, without the Commission's prior approval); and aid for research and development. In addition the directive imposes notification and reporting obligations on Member States in order that the Commission can monitor compliance with the rules.

In the Commission's view the Directive has been generally effective and largely achieved its aims, enabling the Community broadly to maintain its world market share in recent years at around 20%. However the industry is still in difficulty, with depressed prices for newbuildings and repairs world-wide. Despite the

⁽³⁾ 87/167/EEC, OJ L69, 12.03.1987, p.55

improvements made in recent years, many EU yards still lack competitiveness, in particular lagging behind their major Far East competitors in terms of productivity. The world shipbuilding market is likely to become even more competitive in the medium term with overall demand starting to soften in the next decade, and Japanese and Korean yards continuing to make further major improvements in their productivity.

The main pillar of the current aid policy has been operating aid. Initially, through the progressive reduction in the aid ceiling, operating aid encouraged changes towards greater competitiveness. However the necessary impetus has not been sustained in more recent years as the level of the ceiling became static, coupled with the uncertainty over the OECD agreement. Overall, the aid has served to cushion yards from the full rigours of the market. Operating aid also results in significant costs for most Member States, many of which face growing budgetary constraints.

Shipbuilding is the only sector of manufacturing industry which systematically benefits from such aids and it is questionable whether the expenditure involved represents a cost-effective use of limited public resources. Furthermore given the extent to which competition is between EU yards the aid has tended to distort competition within the common market, particularly since there has been a wide variations in the actual levels of aid granted by the Member States, undermining the aim of establishing a level playing field.

Against this background, state aid policy needs to be refocussed to promote and underpin efforts to improve the competitiveness of the industry. This implies shifting away from operating aid to other forms of support, such as investment aid for innovation, better geared towards helping industry achieve the necessary changes and overcome its weaknesses.

III. The Challenges

1. The Overall Situation

Regardless of the high demand the sector is expecting over the next few years, it is facing challenges both present and future. Capacity is expected to grow further, leading industry to the estimation that in 2000 the actual production will not cover more than 70 % of available capacity. These capacity increases are preventing recent increases in demand from being reflected in higher prices.

a. Japan

Shipbuilders in **Japan** have long concentrated their efforts on research and development aiming at reduction of production costs. They increased the productivity of the sector by a permanent technical and technological improvement of their means of production. Productivity has risen by 27 % from 1993 to 1995. Key contributors to competitiveness are increased subcontracting, the use of economies of scale, the benefits from series production, reductions in the cost of domestic and imported materials and an intensive "design for production" policy. Strengths are outstanding facilities, low supply purchasing cost, strong design and technical capability, efficient planning and good

communication between management and workforce. Prices are competitive, the products generally of high quality and delivered on time.

The shipbuilding industry in Japan is concentrated in a few powerful groups which profit from vertical and horizontal integration of activities. They receive considerable support for their Research and Development and enjoy a domestic Home Credit Scheme which provides soft loans to domestic shipbuilding.

Traditionally, national shipowners buy almost exclusively from Japanese yards. This also helped Japan keep its place as world market leader with about 40 % world production share.

Moreover, in 1996 Japan benefited from a substantial reduction of the value of the Yen, as ships are contracted in US\$. This has helped Japan to regain its position as a world leader in shipbuilding, following a period where the value of the Yen was abnormally high when compared to the US\$. The latter situation caused some turbulence in Japan's competitive position.

b. South Korea

Shipbuilders of **South Korea** are making efforts to become the world market leader. In 1996, they reached a 21 % world production share. Korea has undergone a very significant capacity expansion in the 90's. The European industry (AWES) estimates the increase at 1.8 mio cgt, thereby doubling their capacity between 1990 and 1996 and adding 10 % to world production capacity. In order to use this new capacity, South Korean shipbuilders have adopted aggressive pricing practices. By so doing, South Korea became price leader for many types of ships : 80 to 90 % of the production is governed by five large groups. Special strengths are large capacity facilities, emphasis on quality assurance, strong marketing and after sales services and first rate scheduling and planning.

Korean shipbuilders benefit from the Korean Development Bank Loan Scheme financing the construction of Korean flag vessels with soft loans on condition that they are built in Korean shipyards. Capital restrictions in force in South Korea give Korean exporters a competitive advantage which is of particular importance to the shipbuilding industry due to its long lead time between ordering and delivery of a vessel.

Korea has successfully managed to direct public demand for new ships to Korean yards and to exclude competing European yards, as the placing of recent orders for Liquid Natural Gas (LNG) carriers by the Korean Gas Corporation has demonstrated.

c. United States

The USA has a very marginal market share in commercial shipbuilding (less than 1 %). Home production is mainly destined for domestic demand and protected by the Jones Act ⁽⁴⁾. The main subsidy tool for shipbuilders is Title XI of the Merchant Marine Act of 1936. It provides for federal loan guarantees available to US and foreign shipowners for the financing of ships to be built in the USA ⁽⁵⁾. It also provides for support of investment in yard facilities.

Despite its small market share, the USA has been the driving force behind the negotiations to eliminate shipbuilding subsidies worldwide. It is regrettable that now the USA is the only party to the OECD Shipbuilding Agreement that did not ratify it so far.

d. Other Shipbuilding Countries

Norway, as an EEA country, aligns its state aid regulations with EU legislation.

Other shipbuilding countries are beginning to appear on the global market, notably those from Eastern Europe (Poland, Russia, Ukraine, Croatia) and from other Asian countries (China, Vietnam). These countries, which actually cover about 20 % of the market, enjoy the advantage of relatively cheap workforce. They could in the future become serious competitors to European shipbuilding.

e. European Union

Shipbuilders of the **European Union** have undergone a severe restructuring process. This led since 1976 to a reduction of 70% of the workforce and of at least 60% of production capacity, with serious consequences for certain regions dependant on shipbuilding, leading on the other hand to the introduction of new techniques and technology and to modernisation of the yards.

The European shipbuilding industry is still quite fragmented, with 103 shipbuilding companies operating in 1997, of which about a dozen retain a 65 % share of production. The biggest five shipbuilders represented about 36 % in cgt terms in 1996 while the top five shipbuilders in Korea represented 99 % of Korean capacity. Japan's five leading shipbuilding groups had 44 % of the national capacity.

Although no definitive distinction can be made, some yards compete globally while others, notably small and medium yards, are more orientated towards regional demand. Some of these latter shipyards have the advantage of a very flexible approach to any need of customers; they are innovative and constitute one of the strengths of European shipbuilding.

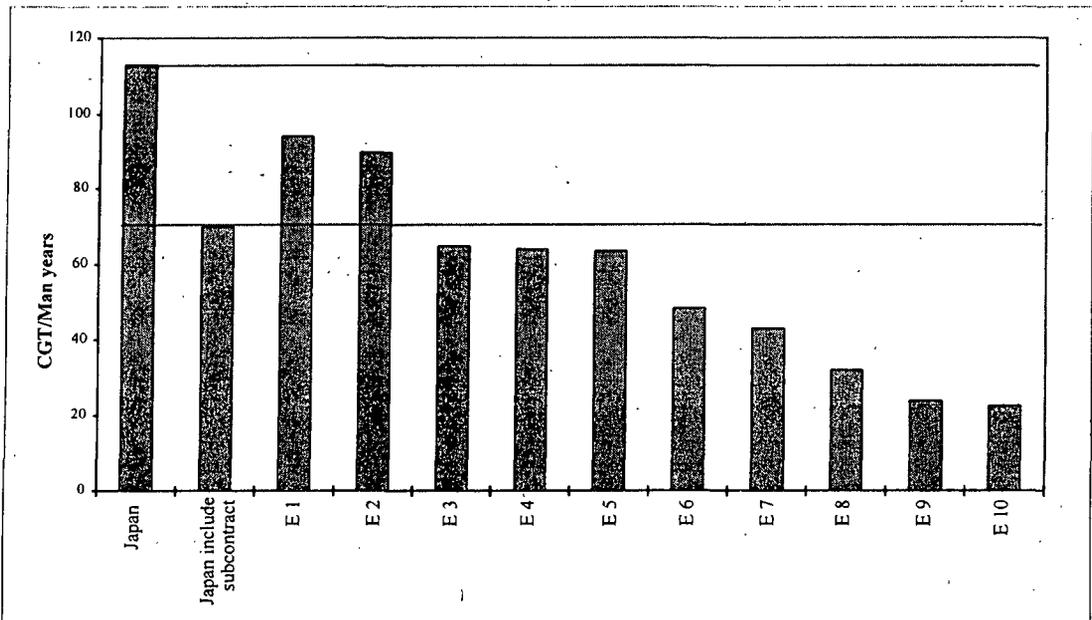
⁽⁴⁾ The Coastwise Laws (so called Jones Act) reserve the transport between US ports exclusively for US built, crewed and flagged vessels. The Jones Act benefits from a derogation clause under WTO rules. Under the OECD Agreement, the Jones Act exemption is limited to about 200,000 cgt per year. If production exceeds the set limits, responsive measures are foreseen in the agreement.

⁽⁵⁾ The guarantee covers loans up to 87,5 % of the contract price and up to 25 years. The OECD Agreement, however, only allows 80 % for up to 12 years. The guarantee would have to be adapted to the Agreement therefore.

Another important characteristic of European shipbuilding is that it generally builds higher value ships than South Korea or Japan. This is reflected in the size of the order book in value terms where, in 1996, the European share was the largest with 31 % of the world order book, while Europe's share in volume terms (cgt) was only approximately 21 % of the order book. This reflects the strength of European shipbuilding in ship design and technical performance.

However, Japanese and, to a lesser extent, South Korean yards are considerably more productive than most European yards. In addition, labour costs in South Korea are lower than in the Community. Most European yards are below the Japanese average level of productivity, but not all. An important observation is that there are yards in Europe that are as competitive as Far Eastern yards (Chart 1). This is not surprising if one takes into consideration the fact that wage levels of Japanese and European shipyards are comparable; in Japan, wage and social costs for skilled workers range between 30 and 35 US\$/hour, comparable to the costs prevailing in the European Union. Even if one admits that longer annual working times may give Japanese employers a certain advantage, it can be concluded that labour cost is not the decisive factor for the divergence of competitiveness between European and Japanese yards.

Chart 1 : Yard Productivity (CGT/Man Years) - 1995



Source : AWES, Shipbuilders' Association of Japan, Yard Information

E yards : no subcontracting included. Some E yards have very little subcontracting.

The fragmentation of the European industry, however, the lack of large series orders and economies of scale, the difference in working methods and habits draw the European yards back in terms of productivity, when compared to Japan and to a certain extent to South Korea.

f. Shipowners

For buyers the price of a ship is the overriding factor in selecting a shipyard. Therefore, financing arrangements are also important. Other decisive factors are speed and reliability of delivery.

There is, however, a difference in the behaviour of European, Korean and Japanese shipowners. Typically, the Far Eastern owners will buy in their region. European owners, in contrast, are far more likely to buy outside Europe, most notably for larger vessels. Most large tankers are purchased in the Far East. The majority of smaller vessels for European owners, however, are being built in the owner's country or within Europe. It is important to note that higher value ships for European owners, including cruise ships and ferries, are almost exclusively being constructed in Europe. Also US owners are placing their orders for these ships in Europe.

g. Naval shipbuilding

If the Union wants to ensure viable naval shipbuilding in Europe, it has to maintain a competitive technological and industrial base.

Naval shipbuilding activities are concentrated in 10 Member States. The workforce is estimated at more than 60,000 people which comes close to the 70,000 employed in commercial shipbuilding. The most important facilities are located in France, Germany, Italy, Sweden and the United Kingdom.

Demand for naval shipbuilding is now reducing. As a consequence, warship builders must look to different markets in order to fill their capacities. One obvious market is commercial shipbuilding. Although access may be easier for mixed yards, some exclusive naval producers have managed to enter the merchant shipbuilding sector with certain ship types (fast ferries).

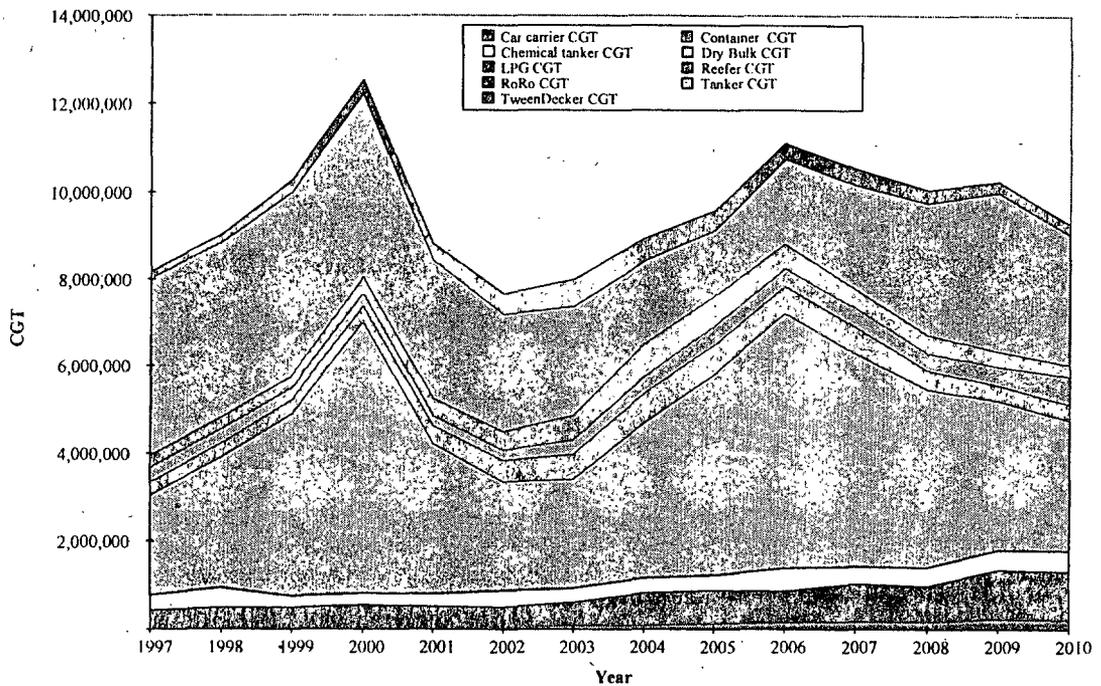
As a result of these trends, it is likely that a number of shipyards will continue to produce both naval and commercial vessels. Such a situation may be considered desirable because of the important opportunities for transfer of technology from naval building to merchant and vice versa. Naval contracts have often required development work on aspects such as fast propulsion, navigational systems and other sophisticated electronics. Europe's current strength in product design and in the marine equipment industry can be partly attributed to naval shipbuilding. However, with the evolution of production processes and the application of information and communication technologies in commercial shipbuilding, this trend could be reversed.

Closer co-operation of yards in areas of common interest to both industries will help keep the necessary know-how and production facilities to create economies of scale. All possibilities of mutual benefit to both activities should be used. The production of fast ferries may be a first step in a series that could be beneficial to both types of activities.

2. Future Trends

Projections for ship demand predict a fall in the presently growing demand after the year 2000 (Chart 2). At the same time, available capacity in the Far East is expected to continue to rise, due to investment in Korea coming on-stream in 1998 and also to a number of Japanese and Korean companies setting up joint ventures in China.

Chart 2 : Future Demand for Ships



Source : Drewry Shipping Consultants

This indicates, given the already low price level, that the competitive pressures on European shipbuilders will grow further. If the demand for less complex vessels, such as bulk carriers, starts to fall, Far Eastern yards can be expected to use their spare capacity by moving into the higher value segments, where European yards currently have a strength. Given the need to utilise the expected very large capacity in the Far East, it is likely that prices will fall, placing the less competitive European yards under particular pressure.

In reacting to the new challenges, yards will need to increase the rate at which they improve their productivity.

3. Best Practices

A recent analysis conducted for the Commission, comparing the performance of European, Japanese and South Korean yards, indicates that the following best practices exist in the shipbuilding sector worldwide and may be associated with high productivity and performance:

- strategy planning: focus on shiptypes with an expected growth in demand;
- structures: consolidation of shipyards and closure of the non-profitable ones;
- formation of strategic alliances amongst yards which could help take advantage of market opportunities and allow some confidence-building between competing yards;

- better integration of shipowners and equipment manufacturers in the production process for inputs in production planning;
- purchasing: reduction of bought-in costs. Maximise subcontracting even outside the country of the yard's installation;
- closer collaboration with other industries to allow for product innovation and technology transfer;
- marketing: aggressive pro-active marketing; exploitation to the maximum of the demand expressed by national shipowners and maintaining contacts with shipowners well after the end of the warranty period for feedback and contacts for future sales;
- use R & D in designing prototypes which minimise the cost and time of production, are as simple as possible and incorporate as many standard components as possible. Very close links with Universities;
- continuous upgrading of production facilities, particularly involving innovation processes, technology transfers, etc., without any constraints on capacity limits;
- Human resources: intensive training of personnel (up to 3 or 4 years); "employee empowerment" : maximising the responsibility of individuals for scheduling and controlling the quality of work; flexibility in work organisation; close, co-operative, working relationship between management and Unions.

IV. Answers

European shipbuilders can respond to the challenge by a significant effort to improve productivity. This requires improved innovative performance in products and processes and closer co-operation. The Commission and Member States are called to direct their support towards these efforts and to assist industry succeed in these improvements.

It needs to be made clear, however, that the industry's future lies primarily in the hands of industry itself, and it is for management to carry out the actions necessary to improve the competitiveness of yards, while involving, where appropriate, the workforce.

This improvement of competitiveness is necessary even if the OECD Shipbuilding Agreement comes into force. It is expected that in such a case the provision of a level playing field and the existence of an Injurious Pricing Instrument could improve the level of prices of ships up to more normal levels and consequently assist the efforts of the EU yards to improve their competitiveness without further granting of state aid.

The efforts required are distributed between the different actors as follows:

- Industry has to overcome its structural disadvantages (Chapter V).
- Member States are asked to adopt and apply a new state aid policy as developed in Chapter VI.
- The Community will direct its efforts towards ensuring a global level playing field, promotion of research and development in shipbuilding, support of industrial cooperation and stimulation of demand for European yards (Chapter VIII).

V. Industry

The best practice observed in point III.3 above shows the direction for the industry's efforts.

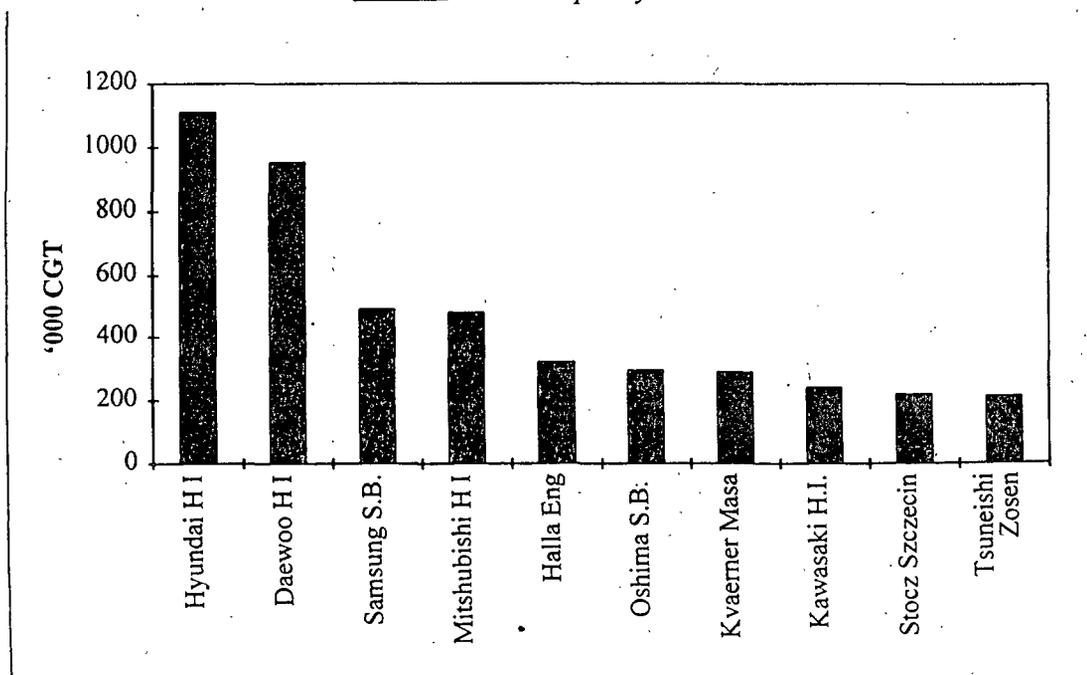
The onus is on industry itself to cope with possible shortcomings. The following areas are, in the opinion of the Commission, of decisive importance.

1. Co-operation and the Benefits of Scale

One of a kind production of tailor-made ships with relatively high unit prices, currently one of the strengths of European yards, may prove to be a competitive disadvantage, if standard type ships are concerned. The scale of production can have a significant impact on its costs. This is particularly the case where there are opportunities for series building.

Shipbuilders might seek the advantages of joining forces in Europe due to the fact that even big European shipbuilders are relatively small as compared to their Japanese or South Korean competitors (Chart 3). This puts them at a disadvantage in the exploitation of economies of scale. These economies are evident in the areas of marketing, research and development including technology transfer, development of common standards and modules or purchasing. European yards therefore need to join forces and co-operate much more closely than before to be in a position to enjoy these economies. This co-operation has to follow commercial considerations and be on an entirely voluntary basis. European yards have to overcome the traditional barrier of lack of trust. It is up to industry to overcome its structural deficiencies.

Chart 3 : Yard Capacity in CGT



Source : ISL based on Lloyds Maritime Information Services and Ernst & Young fieldwork

Experience of the European co-operation EUROYARDS, including four major European yards, as well as national co-operations among smaller shipyards like

CONOSHIP in the Netherlands and MSG in Germany, is encouraging. It shows that, depending on the case, the cost saving from common purchasing, simplifying and standardising common design specifications can be to the order of between 10 and 20 %.

In the area of research and development, COREDES forms a co-operation group within the Committee of European Shipbuilders' Association (CESA).

How shipyards manage their links with suppliers and sub-contractors is essential when considering overall productivity and costs. This may, as best practice shows, include strong co-development with suppliers and increasing sub-contractor responsibility through turnkey installations. Market information suggests that Japanese yards have a 10% cost advantage in the provision of steel resulting from such a close co-operation with the supplier.

Similarly relations with shipowners can provide important advantages for the yards.

The Commission is strongly advocating clearly focused co-operation between European yards and is also encouraging small and medium enterprises to consider not only domestic but also transnational links.

Industry has already made the first steps. A study recently conducted by CESA showed that significant potential exists for co-operation between European yards in various areas. In the view of the Commission, the industry's efforts mentioned above are just first steps. These efforts have to be intensified. The yards should choose which method of cooperation is best suited for their own needs. This choice should be based on market conditions. This is the only way for European yards to adapt their structure to the requirements of global competition in the coming years if they want to survive the challenge of the market.

2. Marketing

Industry also needs to steadily seek new markets like the production of platforms for oil and gas exploitation or even scrapping of ships, given a possible increase in shipbreaking demand further to tighter international safety rules.

At present, Japanese and South Korean owners nearly exclusively order ships in their country or their region, while European owners place a considerable part of their orders outside Europe. Industry needs to strive to open up the Far Eastern market as much as possible and also to try to keep European orders in Europe. Sales and marketing efforts of industry need to be more pro-active, systematic and persistent rather than reactive.

VI. Proposals for Future Aid Policy

In parallel to this communication the Commission is submitting proposals ⁽⁶⁾ for a new aid regime to replace the seventh directive, by the latest upon its proposed expiry at the end of 1998 but preferably sooner. The following briefly summarises the key elements and the main changes from previous policy.

So far as **operating aid** is concerned, there are some arguments for proposing its immediate abolition upon entry into force of the proposed regulation. Industry has already had plenty of time to adjust to the possibility of operating without such aids since the OECD agreement (which prohibits these aids) had been expected to enter into force on 1 January 1996. However, since then there has been some uncertainty over the direction of future policy in the light of the delays in the US ratification of the agreement and it therefore seems appropriate to provide a short, and final, transitional period during which contract-related operating aid, at current aid ceilings, should continue. It is proposed that this transitional period expires on 31 December 2000 (Article 3.1 refers). Since the Community still believes that the OECD agreement represents the best option, this will also allow time to facilitate further efforts to bring that agreement into force.

One year before the abolition of operating aid the Community will monitor the market situation and appraise whether European yards are affected by anti-competitive practices. If it is established at this stage or later that industry is being caused injury by anti-competitive practices including injurious pricing, the Community will consider introducing appropriate measures.

As from 1 January 2001 the only contract-related aid allowed will be home and export credits in conformity with OECD rules on Export Credits for Ships, which until 31 December 2000 will, as at present, not be counted under the aid ceiling (Article 3.4 refers). Since the 1981 OECD Understanding on Export Credits remains in force at present, the Commission considers itself obliged at this stage to propose that the provisions of that Understanding should continue to apply. However, the Commission recognises that certain provisions of the 1994 OECD Understanding on Export Credits for Ships, which has not yet entered into force, more closely reflect market realities and that therefore it might be more appropriate to introduce them in the new regime. The technical and legal issues involved require further examination.

Other forms of operating aid, ie non-contract-related aid (such as loss compensation, rescue aid, etc.) shall be subject to specific new rules on restructuring aid (see below).

It is proposed that **contract-related aid granted in the form of development assistance to developing countries** should continue to be permitted (Article 3.5 refers), notwithstanding Commission concerns that such aid, used by only a very few Member States, may be used as an operating aid to keep yards in business and thus have undesirable effects on competition within the EU. However, since this type of aid is permitted under OECD rules it would unfairly disadvantage EU yards vis à vis their international competitors if their possibilities for such aid were closed

⁽⁶⁾ COM(97) 469

off. Nevertheless the Commission proposes stricter rules requiring aid offers to be open to bids from different yards and closer monitoring to ensure that there are no abuses.

Closure aid (Article 4) continues to be needed to facilitate the further structural adjustment of the sector that will inevitably be necessary, in particular social aids to mitigate the social repercussions of adjustment and aids to cover other normal expenditure occasioned by total or partial closures, both of which can also increase competitiveness of the undertakings concerned when partial closures are involved. However, in order to ensure that possible distortions to intra-EU competition are minimised it is essential that the resulting capacity reductions are genuine and irreversible. In that context, under the current rules closed facilities must remain closed for a period of five years and may not reopen for a further period of another five years without the Commission's prior approval. Given the continuing imbalance between supply and demand on the world shipbuilding market and the perspectives for the future it is very difficult to foresee circumstances where it would be appropriate for the Commission to approve the reopening of closed facilities in the second five-year period. Accordingly it is proposed that closed facilities should not return to shipbuilding for a period of ten years, with no possibility of review after the first five years has elapsed.

Another form of aid necessary for structural adjustment and improved competitiveness is **restructuring aid**. The seventh directive has a lacuna in this respect in that its relevant provisions focus on investment aids rather than other forms of restructuring aid like capital injections, debt write-offs, subsidised loans, rescue aid, etc. It is proposed that there should be specific rules in the proposed new regime (Article 5 refers) based on the general Community guidelines for such aids. Furthermore, drawing on experience from past restructuring cases in the shipbuilding sector, the Commission proposes that there should in particular be very strict rules applying the 'one time/last time' principle, with rigorous assessment and monitoring of viability programmes.

A key element in the Commission's assessment of restructuring aid cases will be the nature and extent of the capacity reductions required as the necessary counterpart for the aid to minimise its distortive effects on the common market. In order to ensure that the capacity reductions are real and genuinely will have an effect on the beneficiary's position on the market, the Commission proposes that the determining factor will be the level of production in the preceding 5 years rather than the notional capacity of the yard.

So far as investment aid is concerned, the Commission fully recognises the role that investment has to play in helping EU yards make significant improvements in their productivity and thus increase their competitiveness. At the same time it is important that measures of support do not unduly distort competition within the common market. Under the approach proposed there would be a differentiation between **investment aids for innovation** (Article 6) and **regional investment aids** for upgrading and modernising yards (Article 7).

The Commission's general policy towards investment aids has been to adopt a strict attitude towards such aids for modernisation and upgrading facilities since such activities are normally undertaken by companies themselves, financed by their own

resources or by commercial loans, as part of normal company operations in a competitive market environment. However the Commission acknowledges that such aids can make a valuable contribution towards overcoming structural handicaps in disadvantaged regions. It is therefore proposed that such aids granted under regional aid schemes may be allowed provided that the aided project is to improve the productivity of existing installations.

Innovation is a key element in improving competitiveness. To promote greater innovation, which carries a higher degree of industrial and technological risk, the Commission is proposing to allow for incentives to be given provided that the project relates to innovative products and processes that are not currently used commercially by other EU operators in the shipbuilding sector.

Research and development(R&D) is another valuable way of promoting medium to longer term competitiveness of the industry. Accordingly it is proposed that **aid for R&D** should continue to be allowed in accordance with the Community framework on aid for research and development (Article 8 refers). In addition, in order that the shipbuilding industry should have the same treatment as all other industrial sectors it is proposed that **aid for environmental protection** in accordance with Community guidelines should also be allowed (Article 9 refers).

Finally, in order to ensure the fullest transparency and to enable the Commission closely to control aid, it is proposed that the current strict rules on notification and monitoring arrangements should be maintained subject to certain improvements (Articles 10 and 11).

As the proposal concerns significant changes to the existing rules, it is proposed that the Regulation should apply for a five year period until the end of 2003 in order to allow sufficient time for the new strategy to produce a structural effect in the sector.

The new policy departs from the approach taken in the Seventh Directive in several respects, of which the most important are:

- as of 31.12.2000 it no longer provides for operating aid ;
- It provides for five years of investment aid granted on the basis of approved regional aid schemes;
- In addition it foresees for five years' aid for innovation;
- It submits shipbuilders to the general Community regime on state aid for rescuing and restructuring firms in difficulties, and environment.

Similarly the new policy is different from the OECD shipbuilding agreement in various respects of which the most important are:

- it continues to allow operating aid until 31 December 2000;
- it does not contain a similar injurious pricing instrument to the one included in the OECD Agreement, but it foresees market monitoring and potential introduction of appropriate measures;
- It provides for investment aid and for innovation aid.
- It provides for rescue and restructuring and environmental aid.

VII. Direct Demand to European Yards

On 6 May 1997, the Commission adopted revised guidelines for state aid in the maritime transport sector ⁽⁷⁾. These guidelines concern the support to European shipowners for operating ships. Insofar as such aid includes investment aid for the purchase of ships, this aid is not directed to specific shipyards.

Member States should consider linking preferential taxation or state guarantees for the purchase of new ships to a "European built" requirement; this "home built" requirement is *de facto* or *de jure* common in the national shipbuilding credit schemes of Member States, the USA, Japan or South Korea and it is, under certain conditions, compatible with the OECD Shipbuilding Agreement. This may be also seen in context with the Community safe seas policy ⁽⁸⁾, to promote the use of safe and clean ships, if aid is given only to ships built in the European Union with very high safety standards.

VIII. The Community

The Community has to establish and assure a framework which helps industry to attain or improve competitiveness and protect it from unfair trade practices elsewhere.

1. Securing a Global Level-Playing Field

Distortions of competition by state aid and barriers to market access in third countries are to the detriment of the competitive position of European shipbuilders. The Commission seeks to eliminate such constrictions. If unfair trade practices prevail, the struggle of European industry for productivity and good performance would be fruitless. An attempt to tackle this problem was the OECD Agreement. In the absence of this agreement, or in addition to it, should it enter into force, the Community must defend its industry.

Actions to open the relatively closed markets of certain countries have to be intensified with the objective of removing the identified obstacles: The use of trade policy instruments, albeit difficult in the shipbuilding sector, has to be examined in the framework of the Market Access Strategy ⁽⁹⁾ either through bilateral channels (e.g. EU/Korea Co-operation Agreement) or multilateral fora (WTO, OECD). The new Trade Barriers Regulation ⁽¹⁰⁾ provides for a wide range of actions to be undertaken by the Community on the basis of rights given to the Community by international agreements, in cases where foreign measures or practices are not consistent with international obligations.

Furthermore, the Commission has received assurance by the South Korean Government that it would not bail out shipyards which have run into financial

⁽⁷⁾ OJ C205, 5.7.1997

⁽⁸⁾ "A Common Policy on Safe Seas" COM(93)66 final

⁽⁹⁾ Cf. the Communication of the Commission "The Global Challenge for International Trade: A Market Access Strategy for the European Union", COM(96)53 final

⁽¹⁰⁾ Council Regulation 3286/94 of 22.12.94, OJ L349 of 31.12.1994, p. 71

difficulties due to their investment plan by which they increase their capacities. These assurances were given on the occasion of the ratification of the OECD Agreement. However, the Commission should try bilaterally to maintain their validity and to monitor the situation even if the OECD Agreement does not enter into force.

2. Promotion of Research, Development and Innovation

The promotion of research and development and its rapid transformation into innovation are keys to competitiveness. Shipbuilders in Japan have invested considerably in R&D. The resulting technological leadership is one of the main reasons for their competitiveness. Japanese yards are continuing these efforts. The European Union has the research capacity to equal this performance. Europe's shipbuilders have to focus much more on R&D.

The promotion of R&D by the European Union should be directed towards improvement of the production process itself and to the development of safe and efficient ships, including new and advanced designs for highly sophisticated ships and onboard systems.

Certainly the other maritime related industrial sectors such as navigation-communication equipment manufacturers, service providers for tourism and transport, etc., have their own needs for R&D. Their demands may create relative benefits for EU Shipbuilding. In order to enhance this effort, the Commission has already set up the Task Force "Maritime Systems of the Future". The Task Force is working in close collaboration with industry to define together priorities for R&D, to create synergy among the different research programmes of the Commission, to avoid overlaps and thereby make optimal use of available programmes. The Task Force began its work in 1995 and has already made considerable progress and defined priorities for an integrated R&D Master Plan. It needs to continue its co-ordination efforts, notably to go into more detail concerning priorities. The Commission and Industry therefore can make the best possible use of available funds and to focus the efforts to practical needs. This should ensure more rapid transformation of research results into effective innovation. It goes without saying that this effort should be made in close collaboration with the Governments of the Member States.

The Commission, recognising the immediate need of shipbuilding and of the other maritime industries for intense and targeted R&D, has included in its proposal concerning the 5th Framework Programme of the European Community for Research, Technological Development and Demonstration Activities, COM(97) 142 final of 30.04.1997, the key action "Marine Technologies". The aim is to encourage, whilst preserving the environment, the development and integration of knowledge and technologies, specific to sea based applications to enable the Community to fully exploit the sea's potential and to improve the competitiveness of the marine industry, to support a veritable "sea" policy. The priority emphasis will be on the technologies needed:

- for the development of advanced ships which are safe and efficient;

- for the use of the sea as an economic means of transporting goods and passengers (advanced port infrastructure, regional maritime transport systems) in conjunction with the key action on "sustainable mobility and intermodality";
- for the rational and sustainable exploitation of the sea as a source of energy and mineral resources (in particular off-shore and subsea technologies).

The challenge is to use R&D within a common strategy in order to secure the competitiveness of the European shipbuilding industry as a whole. It is also essential to involve in this process the supply chain which consists of a large number of Small and Medium Enterprises; as depending on the ship type some 50-80% of the final cost of the ship is generated outside the shipyards. Close collaboration with the Governments of the Member States is essential to allow co-ordination of R&D activities, to avoid overlapping and make best use of scarce financial resources.

It is also essential to make full use of the potential offered by information and communication technology. The Information Society and the key action of the Fifth Framework Programme related to it have a lot to offer. Shipbuilding is a system industry. This requires efficient communication within the network of shipbuilders, shipowners and suppliers, including in particular small and medium-sized enterprises. Shipbuilding therefore is an ideal area for the application of information technology, having considerable potential for improving efficiency. Information technology and applications may lead to significant reduction of production time, notably through concurrent computerised design and engineering. Improvements in the application of information and communication technologies can greatly improve synergies between yards even if they are geographically dispersed. Yards could share a centralised CAD/CAM centre designing standard components or a centralised steel parts cutting facility.

G-7 countries recognised the importance of applying the information society to maritime industries by creating in February 1995, in Brussels, the MARIS (Maritime Information Society) project. This is the only industrial project, among 11 adopted by the G-7 countries and it is co-chaired by the EU and Canada. The G-7 countries have further agreed to show first results of MARIS at EXPO '98 in Lisbon. The MARIS sub-project MARVEL specifically concerns intelligent manufacturing in shipbuilding. Other sub-projects are MARSOURCE, focusing on the preservation of fish stocks, MARTRANS, focusing on logistics and multimodal transport, and SAFEMAR to improve maritime safety by ship reporting and electronic chart display systems. The largest possible diffusion of the results of the MARIS subprojects should assist industry in adopting new information and communication technology.

3. Support Industrial Co-operation

The Commission is supporting horizontal and vertical industrial co-operation. To this end, the Maritime Industries Forum was created by the Commission in 1991. It plays a crucial role in providing a permanent platform for dialogue among all participants of maritime industry, maritime research and development and the Commission, to discuss political, technical and operational questions and to mutually create confidence.

Apart from the Forum, the Commission endorses co-operation between yards or groups of yards and between yards, suppliers and owners.

4. Demand Stimulation

- Short-sea shipping

The Commission is committed to support any industry initiative to reinforce markets. One example is short-sea shipping. An increased share of short-sea shipping in European goods transport would not only contribute to the reduction of congestion of land-based transport corridors, benefiting the environment; it also would create demand for modern relevant ship types. The market for these ships is more regional than that for ocean-going vessels. This demand would therefore be beneficial for European shipbuilders, including SMEs. As the Commission has outlined in the Communication on the development of short-sea shipping in Europe (COM(95)317), Union and Member States both have to contribute to improve the necessary infrastructure to make short-sea shipping an interesting alternative for shippers. This requires better port infrastructure and management and adequate plant for intermodal transport. Commission research programmes should address the issue as well as the Maritime Industries Forum.

- Enforcement of safety rules

With the strict enforcement of safety regulations for ships, substandard shipping could be forced out of Europe. Port State Control offers an efficient means to ensure that substandard ships are no longer in a position to call at European ports. If EU succeeds in forbidding the entry of substandard ships to its ports, a huge step towards improvement of safety at sea and at the same time towards the elimination of these vessels, would take place. On the other hand, demand for new, safe ships would be enhanced. The Commission is committed to support the efficient implementation of Port State Control.

IX. Conclusion

The aim of the new policy towards shipbuilding is to improve industry's competitiveness and allow it to face the challenge of global competition without any further sector specific aid. In order to achieve this goal, industry, Commission and Member States have to make all possible efforts.

1. Industry has to overcome its structural disadvantages;
2. The Commission will direct its efforts within its industrial competitiveness policy to this end:
 - it will provide its best efforts to make sure that industry enjoys a global level playing field;
 - it will particularly support efforts in research and development in shipbuilding;
 - it will support industrial co-operation;
 - it will help stimulate demand for EU yards.
3. Member States are asked to adopt and apply the new State aids policy as developed in this document and in the attached Commission proposal of a Council Regulation on Aid to Shipbuilding. Key issues of the new regulation are:
 - a. No more operating aid can be made available to shipbuilding after 31.12.2000. One year before the abolition of operating aid the Commission will monitor the market in order to establish whether the EU shipbuilding industry is subject to anti-competitive practices by its competitors in the global market and will, if necessary, introduce appropriate measures.
 - b. For a period of five years, following the expiry of the Seventh Directive, special rules on aid for innovation will apply. After this period, this type of aid will be submitted to the same rules that apply to other sectors.
 - c. Shipbuilding will be subject to the same rules as any other sector concerning aid for investment, rescue and restructuring, environment and research and development.

Only with these combined efforts, the objective of making EU shipbuilding a globally competitive industrial sector and terminating the longstanding special aid regime can be achieved.

TABLE 5A - PRODUCTION - SHIPS COMPLETED

		FIGURES AT THE END OF THE YEAR																	1000 CGT
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EU.	BELGIUM	139,8	129,6	95,5	83,0	173,2	102,3	124,4	45,0	25,9	46,8	35,5	71,7	21,8	97,6	5,0	66,0	19,9	17,8
	DENMARK	560,6	382,4	343,8	329,2	338,5	355,4	444,0	350,7	194,4	277,2	287,0	305,5	350,9	414,5	354,3	307,4	420,8	373,9
	FINLAND	N/A	371,9	407,5	440,6	503,3	419,1	282,9	260,4	145,3	262,7	321,2	379,0	211,6	210,2	191,0	122,9	342,8	361,7
	FRANCE	672,4	267,8	443,3	353,3	356,8	357,2	164,1	145,0	207,9	63,2	198,8	114,0	171,1	182,4	65,0	103,1	244,4	209,7
	GERMANY (1)	1468,0	672,8	1270,3	1181,5	1267,8	1164,7	1143,2	1067,0	764,7	885,0	846,5	1001,6	810,1	958,3	853,0	960,6	1073,4	1122,5
	GREECE	N/A	12,8	5,2	61,8	35,7	39,8	43,8	24,7	6,6	12,3	12,5	45,5	6,3	0,0	6,6	0,0	0,0	4,5
	IRELAND	20,3	3,0	17,0	0,0	19,2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	ITALY	353,9	345,5	359,2	156,2	217,0	182,3	123,8	60,9	224,8	119,9	284,5	327,6	423,9	289,2	496,3	439,5	310,4	563,7
	NETHERLANDS	940,0	249,5	341,6	390,0	415,8	259,3	310,2	262,8	146,2	153,1	171,9	263,5	357,0	270,9	236,0	319,0	299,4	344,4
	PORTUGAL	53,0	35,3	6,4	31,2	124,7	18,5	40,3	61,0	26,3	23,0	46,3	64,6	38,5	64,4	62,3	16,5	18,6	30,6
	SPAIN	734,0	441,4	556,8	587,4	488,7	345,9	400,3	229,8	328,4	326,4	306,0	364,8	301,2	428,3	364,7	233,3	205,1	387,2
	SWEDEN	N/A	334,5	421,0	253,2	293,8	179,8	127,4	115,5	123,0	72,1	34,4	45,1	46,3	32,4	24,3	0,0	47,4	25,8
	UNITED KINGDOM	985,1	458,6	243,2	394,0	319,3	305,3	164,4	141,5	162,3	113,2	157,3	144,6	170,5	139,5	148,4	139,1	86,2	124,7
TOTAL EU		5927,1	3705,1	4510,8	4261,4	4553,8	3729,6	3368,8	2764,3	2355,8	2354,9	2701,9	3127,5	2909,2	3087,7	2806,9	2707,4	3068,4	3566,5
OTHER	NORWAY	N/A	323,7	342,1	447,8	278,3	175,9	222,1	162,8	181,3	155,2	79,4	157,9	248,6	311,4	203,4	194,5	186,0	269,5
AWES	POLAND	N/A	497,7	346,4	369,5	277,1	382,4	357,5	340,0	300,0	344,0	237,9	176,6	223,0	305,8	263,5	402,4	488,3	490,9
TOTAL AWES		8285,8	4526,5	5199,3	5078,7	5109,2	4287,9	3948,4	3267,1	2837,1	2854,1	3019,2	3462,0	3380,8	3704,9	3273,8	3304,3	3742,7	4326,9
JAPAN		8348,8	5207,2	5580,9	5811,1	4908,2	6951,1	6498,4	5085,4	3795,3	2952,7	3664,1	4456,0	4417,4	4379,3	4853,8	5176,9	5643,6	6008,7
KOREA		349,4	445,7	512,2	880,3	985,5	1014,9	1633,3	1971,4	1193,5	1504,7	1389,2	1564,2	1729,5	1995,0	1835,3	2104,2	2926,6	3602,5
CHINA		N/A	N/A	27,9	104,5	170,4	297,8	172,4	214,6	207,3	253,1	230,0	303,5	255,4	282,1	445,9	480,5	475,3	777,0
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	126,4	146,6	72,1	21,9	150,0	153,9
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	71,0	61,6	70,6	78,6	76,7	85,5
USSR		N/A	424,8	599,9	504,2	475,3	689,5	274,2	170,4	44,3	56,0	226,7	481,9	365,0					
	RUSSIA														21,9	156,0	96,5	114,5	152,2
	UKRAINE														118,6	153,0	209,6	175,3	182,7
YUGOSLAVIA		N/A	170,6	224,8	220,5	217,0	237,2	281,4	188,4	3,0	230,5	327,7	293,4	239,7	20,7				
	CROATIA														238,1	104,0	165,2	96,9	256,8
REST OF WORLD		5094,2	1860,4	1696,0	1988,5	1666,7	1519,7	1360,5	1241,8	1164,5	747,3	1024,2	1095,3	940,9	1149,6	1415,2	998,3	1053,0	1175,7
TOTAL WORLD		22078,2	12635,2	13841,0	14587,8	13552,3	14998,1	14168,6	12139,1	9245,0	8598,4	9881,1	11656,3	11526,1	12118,4	12379,7	12636,0	14454,6	16721,9

(1) From 1980 on data includes production from Ex-GDR yards

Source : "World Shipbuilding Databank" based on data supplied by Lloyed's Maritime Information Services

ANNEX I

TABLE 5B - PRODUCTION - SHIPS COMPLETED

		FIGURES AT THE END OF THE YEAR														MARKET SHARES			
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EU	BELGIUM	0,6%	1,0%	0,7%	0,6%	1,3%	0,7%	0,9%	0,4%	0,3%	0,5%	0,4%	0,6%	0,2%	0,8%	0,0%	0,5%	0,1%	0,1%
	DENMARK	2,5%	3,0%	2,5%	2,3%	2,5%	2,4%	3,1%	2,9%	2,1%	3,2%	2,9%	2,6%	3,0%	3,4%	2,9%	2,4%	2,9%	2,2%
	FINLAND	N/A	2,9%	2,9%	3,0%	3,7%	2,8%	2,0%	2,1%	1,6%	3,1%	3,3%	3,3%	1,8%	1,7%	1,5%	1,0%	2,4%	2,2%
	FRANCE	3,0%	2,1%	3,2%	2,4%	2,6%	2,4%	1,2%	1,2%	2,2%	0,7%	2,0%	1,0%	1,5%	1,5%	0,5%	0,8%	1,7%	1,3%
	GERMANY (1)	6,6%	5,3%	9,2%	8,1%	9,4%	7,8%	8,1%	8,8%	8,3%	10,3%	8,6%	8,6%	7,0%	7,9%	6,9%	7,6%	7,4%	6,7%
	GREECE	N/A	0,1%	0,0%	0,4%	0,3%	0,3%	0,3%	0,2%	0,1%	0,1%	0,1%	0,4%	0,1%	0,0%	0,1%	0,0%	0,0%	0,0%
	IRELAND	0,1%	0,0%	0,1%	0,0%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
	ITALY	1,6%	2,7%	2,6%	1,1%	1,6%	1,2%	0,9%	0,5%	2,4%	1,4%	2,9%	2,8%	3,7%	2,4%	4,0%	3,5%	2,1%	3,4%
	NETHERLANDS	4,3%	2,0%	2,5%	2,7%	3,1%	1,7%	2,2%	2,2%	1,6%	1,8%	1,7%	2,3%	3,1%	2,2%	1,9%	2,5%	2,1%	2,1%
	PORTUGAL	0,2%	0,3%	0,0%	0,2%	0,9%	0,1%	0,3%	0,5%	0,3%	0,3%	0,5%	0,6%	0,3%	0,5%	0,5%	0,1%	0,1%	0,2%
	SPAIN	3,3%	3,5%	4,0%	4,0%	3,6%	2,3%	2,8%	1,9%	3,6%	3,8%	3,1%	3,1%	2,6%	3,5%	2,9%	1,8%	1,4%	2,3%
	SWEDEN	N/A	2,6%	3,0%	1,7%	2,2%	1,2%	0,9%	1,0%	1,3%	0,8%	0,3%	0,4%	0,4%	0,3%	0,2%	0,0%	0,3%	0,2%
UNITED KINGDOM	4,5%	3,6%	1,8%	2,7%	2,4%	2,0%	1,2%	1,2%	1,8%	1,3%	1,6%	1,2%	1,5%	1,2%	1,2%	1,1%	0,6%	0,7%	
TOTAL EU		26,8%	29,3%	32,6%	29,2%	33,6%	24,9%	23,8%	22,8%	25,5%	27,4%	27,3%	26,8%	25,2%	25,5%	22,7%	21,4%	21,2%	21,3%
OTHER	NORWAY	N/A	2,6%	2,5%	3,1%	2,1%	1,2%	1,6%	1,3%	2,0%	1,8%	0,8%	1,4%	2,2%	2,6%	1,6%	1,5%	1,3%	1,6%
AWES	POLAND	N/A	3,9%	2,5%	2,5%	2,0%	2,5%	2,5%	2,8%	3,2%	4,0%	2,4%	1,5%	1,9%	2,5%	2,1%	3,2%	3,4%	2,9%
TOTAL AWES		37,5%	35,8%	37,6%	34,8%	37,7%	28,6%	27,9%	26,9%	30,7%	33,2%	30,6%	29,7%	29,3%	30,6%	26,4%	26,1%	25,9%	25,9%
JAPAN		37,8%	41,2%	40,3%	39,8%	36,2%	46,3%	45,9%	41,9%	41,1%	34,3%	37,1%	38,2%	38,3%	36,1%	39,2%	41,0%	39,0%	35,9%
KOREA		1,6%	3,5%	3,7%	6,0%	7,3%	6,8%	11,5%	16,2%	12,9%	17,5%	14,1%	13,4%	15,0%	16,5%	14,8%	16,7%	20,2%	21,5%
CHINA		N/A	N/A	0,2%	0,7%	1,3%	2,0%	1,2%	1,8%	2,2%	2,9%	2,3%	2,6%	2,2%	2,3%	3,6%	3,8%	3,3%	4,6%
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,1%	1,2%	0,6%	0,2%	1,0%	0,9%
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0,6%	0,5%	0,6%	0,6%	0,5%	0,5%
USSR		N/A	3,4%	4,3%	3,5%	3,5%	4,6%	1,9%	1,4%	0,5%	0,7%	2,3%	4,1%	3,2%					
	RUSSIA														0,2%	1,3%	0,8%	0,8%	0,9%
	UKRAINE														1,0%	1,2%	1,7%	1,2%	1,1%
YUGOSLAVIA		N/A	1,4%	1,6%	1,5%	1,6%	1,6%	2,0%	1,6%	0,0%	2,7%	3,3%	2,5%	2,1%	0,2%				
	CROATIA														2,0%	0,8%	1,3%	0,7%	1,5%
REST OF WORLD		23,1%	14,7%	12,3%	13,6%	12,4%	10,1%	9,6%	10,2%	12,6%	8,7%	10,4%	9,4%	8,2%	9,5%	11,4%	7,9%	7,3%	7,0%
TOTAL WORLD		100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

(1) From 1980 on data includes production from Ex-GDR yards

Source : "World Shipbuilding Databank" based on data supplied by Lloyd's Maritime Information Services

PRODUCTION - SHIPS COMPLETED (1976 - 1996)

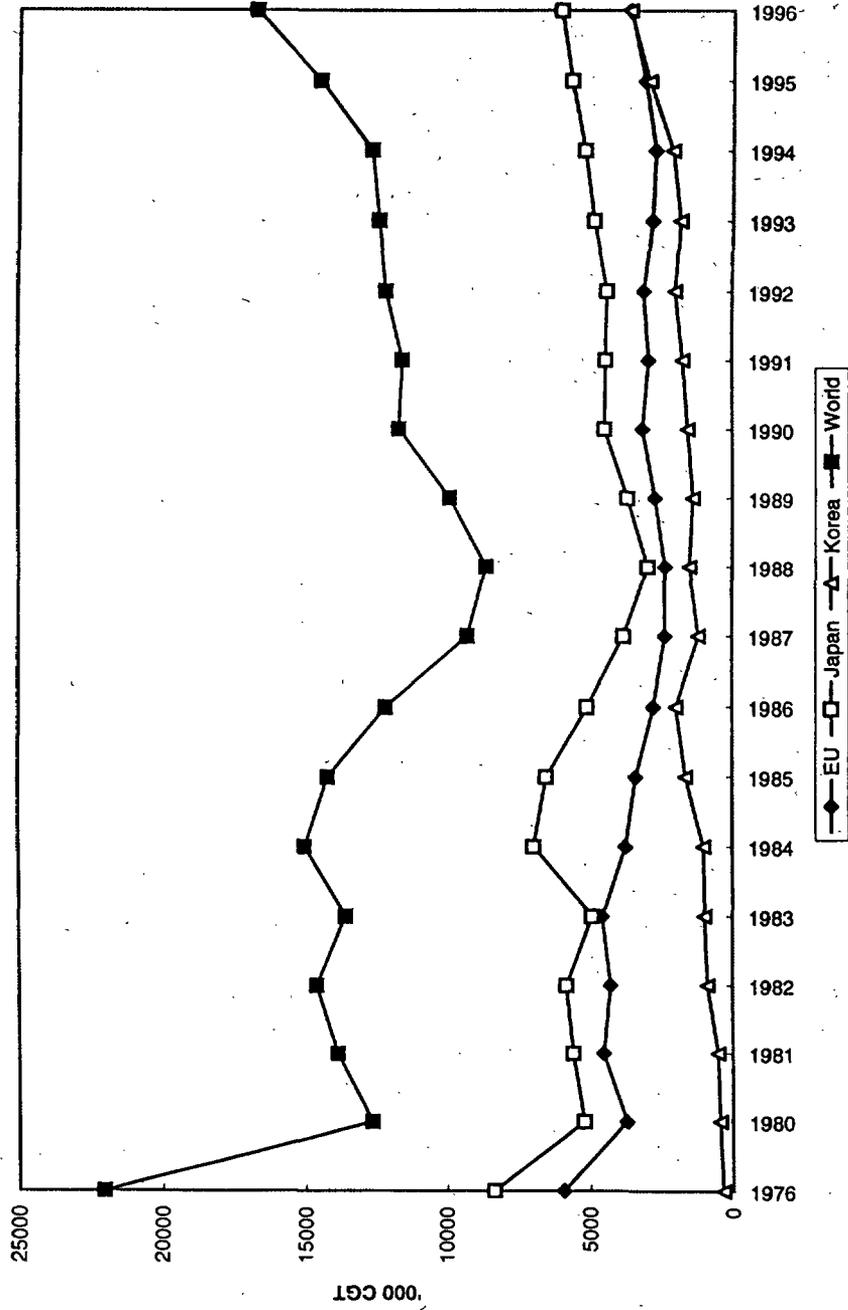


TABLE 6A - NEW ORDERS

		FIGURES AT THE END OF THE YEAR																	1000 CGT
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EU	BELGIUM	75,0	53,8	81,4	43,3	58,7	69,5	26,8	43,2	34,0	52,0	101,7	71,4	75,1	14,0	18,4	53,8	3,1	1,0
	DENMARK	317,1	284,6	296,6	250,6	428,9	405,2	86,0	305,9	219,2	205,3	192,4	596,4	265,9	246,6	390,4	381,9	109,1	269,2
	FINLAND	N/A	523,9	502,5	221,1	135,4	389,5	158,0	202,2	637,7	108,0	63,0	256,7	139,4	178,7	515,1	276,7	177,5	384,6
	FRANCE	63,6	556,4	333,0	175,9	136,4	106,5	262,5	132,4	60,5	204,6	165,9	136,2	327,9	35,0	226,6	240,0	65,7	110,8
	GERMANY (1)	726,1	613,0	1249,9	1239,9	1236,9	1072,9	1228,2	1297,1	872,4	877,6	1400,6	875,6	559,1	858,9	1029,0	1034,1	1711,2	797,2
	GREECE	N/A	82,4	4,5	10,3	4,6	7,4	29,4	5,1	6,5	6,1	5,0	0,8	8,9	8,7	7,2	0,0	0,8	0,0
	IRELAND	19,2	1,3	18,2	1,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	ITALY	301,5	231,2	144,7	243,2	57,1	68,2	257,4	229,0	408,7	172,3	564,8	413,1	380,5	134,9	511,2	344,6	1081,3	661,9
	NETHERLANDS	626,4	373,3	365,2	309,0	237,3	248,4	269,8	137,0	91,9	356,2	236,3	277,1	296,7	211,0	305,2	342,9	460,1	552,0
	PORTUGAL	73,0	30,7	55,5	27,8	36,0	30,6	1,2	29,5	78,1	33,1	69,6	79,6	8,3	1,5	5,7	43,6	63,6	97,9
	SPAIN	297,0	737,5	675,2	323,9	222,1	92,2	197,6	258,5	421,7	453,8	274,1	487,8	74,8	127,5	359,9	404,0	383,9	331,0
	SWEDEN	N/A	205,4	359,3	184,5	278,4	34,0	16,1	59,2	71,4	13,2	110,1	3,8	4,3	23,5	1,0	0,0	12,2	99,2
	UNITED KINGDOM	627,6	350,2	410,8	301,5	150,4	107,6	224,4	112,0	116,5	124,2	209,2	205,1	172,6	119,8	65,5	38,8	107,4	88,6
TOTAL EU		3126,5	4043,7	4496,8	3332,3	2982,2	2632,0	2757,4	2811,1	3018,6	2606,4	3392,7	3403,6	2313,5	1960,1	3435,2	3160,4	4175,9	3393,4
OTHER	NORWAY	N/A	381,6	408,7	156,4	108,8	208,2	129,9	136,4	139,2	112,1	398,8	190,9	118,1	165,0	251,8	262,9	232,2	292,9
AWES	POLAND	N/A	208,4	146,0	133,3	489,8	417,1	270,3	321,4	302,6	218,4	209,5	218,4	295,9	434,5	191,2	678,9	1085,2	484,5
TOTAL AWES		4659,5	4633,7	5051,5	3622,0	3580,8	3257,3	3157,6	3268,9	3460,4	2936,9	4001,0	3812,9	2727,5	2559,6	3878,2	4102,2	5493,3	4170,8
JAPAN		7337,5	6708,3	5823,1	4859,4	7389,1	6040,0	4440,0	3431,6	3120,5	3360,7	5879,7	6116,4	4433,0	3268,3	4681,4	6688,4	5857,4	6299,4
KOREA		325,4	939,3	893,3	1001,5	2147,1	1180,9	806,5	1352,4	1942,6	1203,0	1671,4	2169,2	2278,1	1085,3	3672,6	3088,0	4113,3	3731,1
CHINA		N/A	N/A	233,0	119,6	285,9	179,9	204,0	321,5	263,8	330,6	258,5	387,4	429,7	585,0	436,5	547,4	837,4	1257,5
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	550,4	57,0	149,6	140,2	206,0	104,3
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109,9	45,8	41,5	63,9	133,6	40,4
USSR		N/A	12,1	24,0	68,4	N/A	2,9	N/A	N/A	N/A	92,6	214,1	209,1	83,6					
RUSSIA															254,6	358,3	170,2	81,2	99,5
UKRAINE															105,9	290,5	396,7	191,1	89,6
YUGOSLAVIA		N/A	242,3	76,8	320,0	123,8	75,0	329,6	447,3	130,8	306,9	478,5	322,6	127,4					
CROATIA															129,0	153,4	270,4	58,3	320,7
REST OF WORLD		3659,9	1822,0	1951,4	1542,3	1323,4	1041,7	1383,7	660,4	822,0	895,2	1061,1	1285,9	1175,4	729,6	864,0	1285,9	1422,8	1406,0
TOTAL WORLD		15982,3	14357,7	14053,1	11533,2	14850,1	11777,7	10321,4	9482,1	9740,1	9125,9	13564,3	14303,5	11915,0	8820,1	14526,0	16753,3	18394,4	17519,3

(1) From 1980 on data includes new orders from Ex-GDR yards

Source : "World Shipbuilding Databank" based on data supplied by Lloyd's Maritime Information Services

TABLE 6B - NEW ORDERS

		FIGURES AT THE END OF THE YEAR																	MARKET SHARES	
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
EU	BELGIUM	0,5%	0,4%	0,6%	0,4%	0,4%	0,6%	0,3%	0,5%	0,3%	0,6%	0,7%	0,5%	0,6%	0,2%	0,1%	0,3%	0,0%	0,0%	
	DENMARK	2,0%	2,0%	2,1%	2,2%	2,9%	3,4%	0,8%	3,2%	2,3%	2,2%	1,4%	4,2%	2,2%	2,8%	2,7%	2,3%	0,6%	1,5%	
	FINLAND	N/A	3,6%	3,6%	1,9%	0,9%	3,3%	1,5%	2,1%	6,5%	1,2%	0,5%	1,8%	1,2%	2,0%	3,5%	1,7%	1,0%	2,2%	
	FRANCE	0,4%	3,9%	2,4%	1,5%	0,9%	0,9%	2,5%	1,4%	0,6%	2,2%	1,2%	1,0%	2,8%	0,4%	1,6%	1,4%	0,4%	0,6%	
	GERMANY (1)	4,5%	4,3%	8,9%	10,8%	8,3%	9,1%	11,9%	13,7%	9,0%	9,6%	10,3%	6,1%	4,7%	9,7%	7,1%	6,2%	9,3%	4,6%	
	GREECE	N/A	0,6%	0,0%	0,1%	0,0%	0,1%	0,3%	0,1%	0,1%	0,1%	0,1%	0,0%	0,0%	0,1%	0,1%	0,0%	0,0%	0,0%	
	IRELAND	0,1%	0,0%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
	ITALY	1,9%	1,6%	1,0%	2,1%	0,4%	0,6%	2,5%	2,4%	4,2%	1,9%	4,2%	2,9%	3,2%	1,5%	3,5%	2,1%	5,9%	3,8%	
	NETHERLANDS	3,9%	2,6%	2,6%	2,7%	1,6%	2,1%	2,6%	1,4%	0,9%	3,9%	1,7%	1,9%	2,5%	2,4%	2,1%	2,0%	2,5%	3,2%	
	PORTUGAL	0,5%	0,2%	0,4%	0,2%	0,2%	0,3%	0,0%	0,3%	0,8%	0,4%	0,5%	0,6%	0,1%	0,0%	0,0%	0,3%	0,3%	0,6%	
	SPAIN	1,9%	5,1%	4,8%	2,8%	1,5%	0,8%	1,9%	2,7%	4,3%	5,0%	2,0%	3,4%	0,6%	1,4%	2,5%	2,4%	2,1%	1,9%	
	SWEDEN	N/A	1,4%	2,6%	1,6%	1,9%	0,3%	0,2%	0,6%	0,7%	0,1%	0,8%	0,0%	0,0%	0,3%	0,0%	0,0%	0,1%	0,6%	
	UNITED KINGDOM	3,9%	2,4%	2,9%	2,6%	1,0%	0,9%	2,2%	1,2%	1,2%	1,4%	1,5%	1,4%	1,4%	1,4%	0,5%	0,2%	0,6%	0,5%	
TOTAL EU		19,6%	28,2%	32,0%	28,9%	20,1%	22,3%	26,7%	29,6%	31,0%	28,6%	25,0%	23,8%	19,4%	22,2%	23,6%	18,9%	22,7%	19,4%	
OTHER	NORWAY	N/A	2,7%	2,9%	1,4%	0,7%	1,8%	1,3%	1,4%	1,4%	1,2%	2,9%	1,3%	1,0%	1,9%	1,7%	1,6%	1,3%	1,7%	
AWES	POLAND	N/A	1,5%	1,0%	1,2%	3,3%	3,5%	2,6%	3,4%	3,1%	2,4%	1,5%	1,5%	2,5%	4,9%	1,3%	4,1%	5,9%	2,8%	
TOTAL AWES		29,2%	32,3%	35,9%	31,4%	24,1%	27,7%	30,6%	34,5%	35,5%	32,2%	29,5%	26,7%	22,9%	29,0%	26,7%	24,5%	29,9%	23,8%	
JAPAN		45,9%	46,7%	41,4%	42,1%	49,8%	51,3%	43,0%	36,2%	32,0%	36,8%	43,3%	42,8%	37,2%	37,1%	32,2%	39,9%	31,8%	36,0%	
KOREA		2,0%	6,5%	6,4%	8,7%	14,5%	10,0%	7,8%	14,3%	19,9%	13,2%	12,3%	15,2%	19,1%	12,3%	25,3%	18,4%	22,4%	21,3%	
CHINA		N/A	N/A	1,7%	1,0%	1,9%	1,5%	2,0%	3,4%	2,7%	3,6%	1,9%	2,7%	3,6%	6,6%	3,0%	3,3%	4,6%	7,2%	
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,6%	0,6%	1,0%	0,8%	1,1%	0,6%	
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0,9%	0,5%	0,3%	0,4%	0,7%	0,2%	
USSR		N/A	0,1%	0,2%	0,6%	N/A	0,0%	N/A	N/A	N/A	1,0%	1,6%	1,5%	0,7%						
RUSSIA															2,9%	2,5%	1,0%	0,4%	0,6%	
UKRAINE															1,2%	2,0%	2,4%	1,0%	0,5%	
YUGOSLAVIA		N/A	1,7%	0,5%	2,8%	0,8%	0,6%	3,2%	4,7%	1,3%	3,4%	3,5%	2,3%	1,1%						
CROATIA															1,5%	1,1%	1,6%	0,3%	1,8%	
REST OF WORLD		22,9%	12,7%	13,9%	13,4%	8,9%	8,8%	13,4%	7,0%	8,4%	9,8%	7,8%	9,0%	9,9%	8,3%	5,9%	7,7%	7,7%	8,0%	
TOTAL WORLD		100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	

(1) From 1980 on data includes new orders from Ex-GDR yards

Source : "World Shipbuilding Databank" based on data supplied by Lloyd's Maritime Information Services

NEW ORDERS (1976 - 1996)

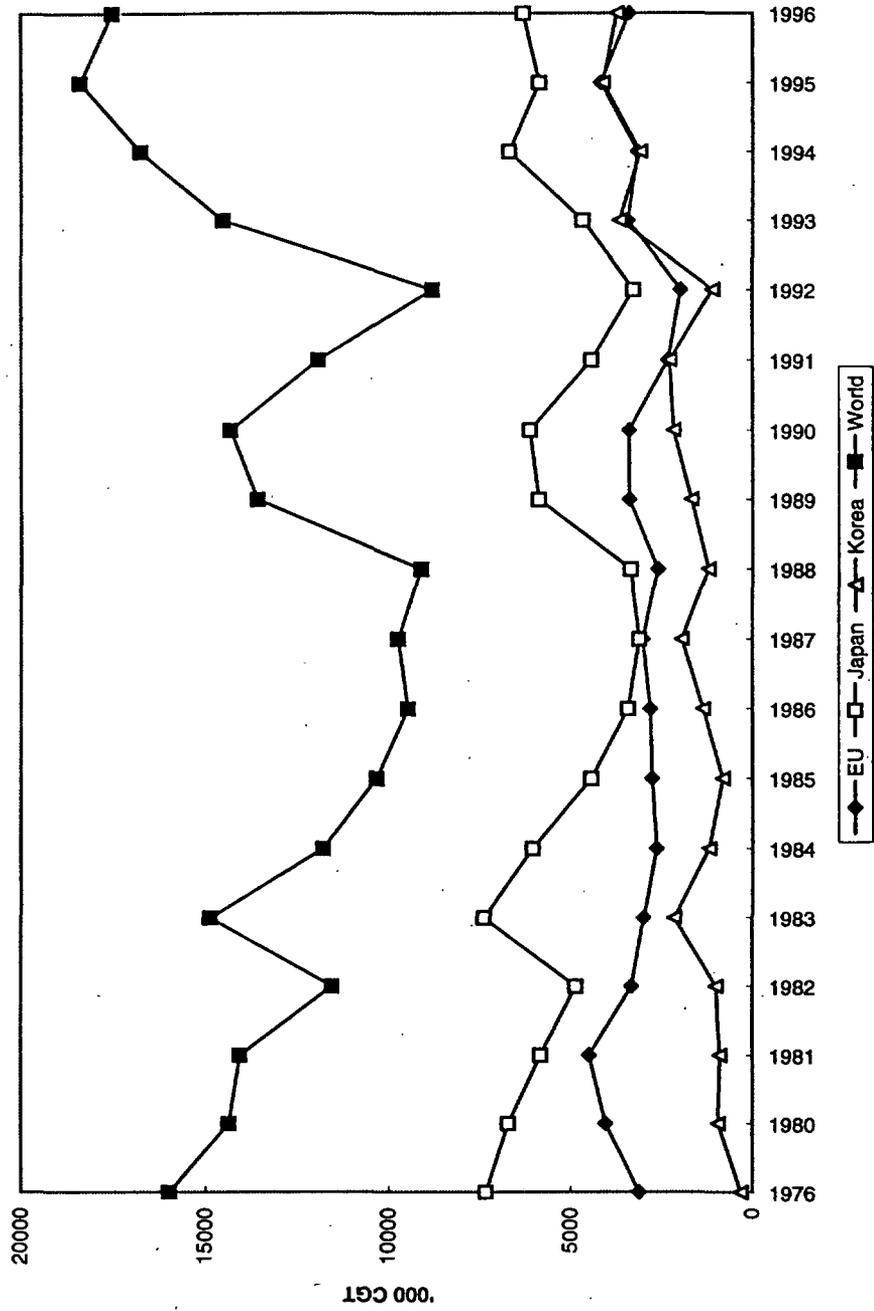


TABLE 8A - ORDER BOOK

		FIGURES AT THE END OF THE YEAR																	1000 CGT
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EU	BELGIUM	277,0	331,7	311,5	261,1	143,7	136,1	62,1	60,0	75,0	82,0	147,7	154,4	213,4	116,8	133,8	117,7	95,5	21,0
	DENMARK	923,5	652,4	618,9	603,9	707,7	692,2	442,1	429,8	473,9	459,6	589,7	927,7	876,6	674,3	698,4	595,7	298,7	650,9
	FINLAND	N/A	1144,3	1139,5	1023,8	710,3	642,2	544,4	483,9	991,0	962,9	652,1	589,4	494,3	467,1	791,2	960,8	855,4	880,6
	FRANCE	1770,4	1193,7	1138,2	978,5	598,6	263,3	382,7	371,2	234,5	379,9	361,9	397,2	556,8	410,8	568,7	677,5	512,8	447,7
	GERMANY (1)	2113,3	950,9	1082,0	1177,7	1178,1	959,4	1118,9	1281,7	1426,3	1429,2	1974,0	1955,0	1529,9	1471,4	1600,3	1591,0	2264,4	1949,3
	GREECE	N/A	240,6	245,4	191,4	146,1	137,4	119,9	102,8	121,5	116,8	113,6	69,1	73,0	42,3	43,7	103,7	13,1	0,5
	IRELAND	43,9	17,8	19,3	20,0	2,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	ITALY	1036,2	639,8	427,3	480,4	356,3	195,5	345,5	465,8	864,8	904,2	1188,6	1298,4	1190,9	1036,4	1039,8	1028,7	1860,3	1843,4
	NETHERLANDS	917,1	493,7	551,7	498,8	308,8	331,6	300,3	195,6	141,8	365,1	414,5	443,4	387,5	321,5	386,1	441,8	600,5	810,5
	PORTUGAL	N/A	191,2	240,4	258,4	124,1	138,3	94,0	67,0	108,3	114,0	155,7	181,6	153,1	96,5	45,6	75,9	112,3	155,8
	SPAIN	N/A	1769,5	1754,0	1325,3	967,4	690,5	491,5	527,7	635,6	837,7	853,7	1004,1	757,2	476,4	475,2	668,1	749,4	687,6
	SWEDEN	N/A	703,8	646,3	494,9	494,5	267,8	181,7	137,5	93,8	39,0	115,3	64,3	23,9	23,7	0,4	0,4	25,8	99,2
UNITED KINGDOM	1989,4	615,0	768,9	714,1	506,1	292,3	352,5	325,4	369,7	317,1	376,5	418,9	413,6	411,5	321,4	212,4	193,4	183,6	
TOTAL EU		9070,8	8944,4	8943,4	8028,3	6243,8	4746,6	4435,6	4448,4	5536,2	6007,5	6943,3	7503,5	6670,2	5548,7	6104,6	6473,7	7581,6	7730,1
OTHER	NORWAY	N/A	589,3	670,3	371,9	185,6	229,8	148,1	146,8	136,9	114,3	422,8	463,6	381,8	284,3	370,6	411,4	356,5	388,8
AWES	POLAND	N/A	1634,6	1459,0	1174,6	1143,1	1272,1	1018,1	1041,6	1251,6	1131,3	1080,1	1136,6	999,7	1124,6	1013,7	998,5	1670,7	1437,1
TOTAL AWES		15839,2	11168,3	11072,7	9574,8	7572,5	6248,5	5601,8	5636,8	6924,7	7253,1	8446,2	9103,7	8051,7	6957,6	7488,9	7883,6	9608,8	9556,0
JAPAN		12093,8	7297,8	7457,7	6640,2	8477,9	8221,5	5915,2	3915,9	2918,5	3473,9	5696,5	7494,7	7621,8	6482,7	6255,6	8000,0	8131,8	8465,9
KOREA		7943,2	1320,3	1711,1	1854,9	2898,4	3223,1	2578,7	1909,2	2639,1	2342,7	2813,1	3500,7	3922,7	3012,2	4792,5	5867,1	6822,6	6811,7
CHINA		N/A	N/A	260,9	298,3	493,5	433,2	486,5	547,0	647,3	809,8	681,0	813,6	942,0	1235,7	1257,4	1261,6	1447,5	1910,9
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	912,6	766,0	860,5	943,7	975,1	756,3
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	237,0	224,0	142,2	148,6	199,2	147,6
USSR		N/A	N/A	128,9	92,7	53,9	42,8	N/A	N/A	N/A	74,1	248,5	343,1	360,4					
RUSSIA															465,4	778,9	887,0	742,2	537,0
UKRAINE															237,9	426,0	701,6	719,2	554,4
YUGOSLAVIA		N/A	760,7	626,7	699,9	492,6	455,4	545,9	840,0	751,4	861,9	1011,4	1046,9	886,3	133,3	N/A	N/A		
CROATIA															532,2	510,7	466,0	430,3	504,7
REST OF WORLD		3693,0	5045,1	5105,6	4570,7	4129,7	3448,0	3435,8	2796,8	2675,0	2857,9	3071,2	3343,5	3003,2	2601,8	2279,7	2797,4	2830,8	2857,0
TOTAL WORLD		39569,2	25592,2	26363,6	23731,5	24118,5	22072,5	18563,9	15645,7	16556,0	17673,4	21967,9	25646,2	25937,7	22648,8	24792,4	28956,6	31907,5	32101,5

(1) From 1980 on data includes order book from Ex-GDR yards

Source : "World Shipbuilding Databank" based on data supplied by Lloyd's Maritime Information Services

TABLE 8B - ORDER BOOK

		FIGURES AT THE END OF THE YEAR															MARKET SHARES		
		1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
EU	BELGIUM	0,7%	1,3%	1,2%	1,1%	0,6%	0,6%	0,3%	0,4%	0,5%	0,5%	0,7%	0,6%	0,8%	0,5%	0,5%	0,4%	0,3%	0,1%
	DENMARK	2,3%	2,5%	2,3%	2,5%	2,9%	3,1%	2,4%	2,7%	2,9%	2,6%	2,7%	3,6%	3,4%	3,0%	2,8%	2,1%	0,9%	2,0%
	FINLAND	N/A	4,5%	4,3%	4,3%	2,9%	2,9%	2,9%	3,1%	6,0%	5,4%	3,0%	2,3%	1,9%	2,1%	3,2%	3,3%	2,7%	2,7%
	FRANCE	4,5%	4,7%	4,3%	4,1%	2,5%	1,2%	2,1%	2,4%	1,4%	2,1%	1,6%	1,5%	2,1%	1,8%	2,3%	2,3%	1,6%	1,4%
	GERMANY (1)	5,3%	3,7%	4,1%	5,0%	4,9%	4,3%	6,0%	8,2%	8,6%	8,1%	9,0%	7,6%	5,9%	6,5%	6,5%	5,5%	7,1%	6,1%
	GREECE	N/A	0,9%	0,9%	0,8%	0,6%	0,6%	0,6%	0,7%	0,7%	0,7%	0,5%	0,3%	0,3%	0,2%	0,2%	0,4%	0,0%	0,0%
	IRELAND	0,1%	0,1%	0,1%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
	ITALY	2,6%	2,5%	1,6%	2,0%	1,5%	0,9%	1,9%	3,0%	5,2%	5,1%	5,4%	5,1%	4,6%	4,6%	4,2%	3,6%	5,8%	5,7%
	NETHERLANDS	2,3%	1,9%	2,1%	2,1%	1,3%	1,5%	1,6%	1,3%	0,9%	2,1%	1,9%	1,7%	1,5%	1,4%	1,6%	1,5%	1,9%	2,5%
	PORTUGAL	N/A	0,7%	0,9%	1,1%	0,5%	0,6%	0,5%	0,4%	0,7%	0,6%	0,7%	0,7%	0,6%	0,4%	0,2%	0,3%	0,4%	0,5%
	SPAIN	N/A	6,9%	6,7%	5,6%	4,0%	3,1%	2,6%	3,4%	3,8%	4,7%	3,9%	3,9%	2,9%	2,1%	1,9%	2,3%	2,3%	2,1%
SWEDEN	N/A	2,8%	2,5%	2,1%	2,1%	1,2%	1,0%	0,9%	0,6%	0,2%	0,5%	0,3%	0,1%	0,1%	0,0%	0,0%	0,1%	0,3%	
UNITED KINGDOM	5,0%	2,4%	2,9%	3,0%	2,1%	1,3%	1,9%	2,1%	2,2%	1,8%	1,7%	1,6%	1,6%	1,8%	1,3%	0,7%	0,6%	0,6%	
TOTAL EU		22,9%	34,9%	33,9%	33,8%	25,9%	21,5%	23,9%	28,4%	33,4%	34,0%	31,6%	29,3%	25,7%	24,5%	24,6%	22,4%	23,8%	24,1%
OTHER AWES	NORWAY	N/A	2,3%	2,5%	1,6%	0,8%	1,0%	0,8%	0,9%	0,8%	0,6%	1,9%	1,8%	1,5%	1,3%	1,5%	1,4%	1,1%	1,2%
	POLAND	N/A	6,4%	5,5%	4,9%	4,7%	5,8%	5,5%	6,7%	7,6%	6,4%	4,9%	4,4%	3,9%	5,0%	4,1%	3,4%	5,2%	4,5%
TOTAL AWES		40,0%	43,6%	42,0%	40,3%	31,4%	28,3%	30,2%	36,0%	41,8%	41,0%	38,4%	35,5%	31,0%	30,7%	30,2%	27,2%	30,1%	29,8%
JAPAN		30,6%	28,5%	28,3%	28,0%	35,2%	37,2%	31,9%	25,0%	17,6%	19,7%	25,9%	29,2%	29,4%	28,6%	25,2%	27,6%	25,5%	26,4%
KOREA		20,1%	5,2%	6,5%	7,8%	12,0%	14,6%	13,9%	12,2%	15,9%	13,3%	12,8%	13,6%	15,1%	13,3%	19,3%	20,3%	21,4%	21,2%
CHINA		N/A	N/A	1,0%	1,3%	2,0%	2,0%	2,6%	3,5%	3,9%	4,6%	3,1%	3,2%	3,6%	5,5%	5,1%	4,4%	4,5%	6,0%
ROMANIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,5%	3,4%	3,5%	3,3%	3,1%	2,4%
BULGARIA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0,9%	1,0%	0,6%	0,5%	0,6%	0,5%
USSR		N/A	N/A	0,5%	0,4%	0,2%	0,2%	N/A	N/A	N/A	0,4%	1,1%	1,3%	1,4%					
RUSSIA															2,1%	3,1%	3,1%	2,3%	1,7%
UKRAINE															1,1%	1,7%	2,4%	2,3%	1,7%
YUGOSLAVIA		N/A	3,0%	2,4%	2,9%	2,0%	2,1%	2,9%	5,4%	4,5%	4,9%	4,6%	4,1%	3,4%	0,6%	N/A	N/A	0,0%	0,0%
CROATIA															2,3%	2,1%	1,6%	1,3%	1,6%
REST OF WORLD		9,3%	19,7%	19,4%	19,3%	17,1%	15,6%	18,5%	17,9%	16,2%	16,2%	14,0%	13,0%	11,6%	11,5%	9,2%	9,7%	8,9%	8,9%
TOTAL WORLD		100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

(1) From 1980 on data includes order book from Ex-GDR yards

Source: "World Shipbuilding Databank" based on data supplied by Lloyd's Maritime Information Services

ORDER BOOK (1976 - 1996)

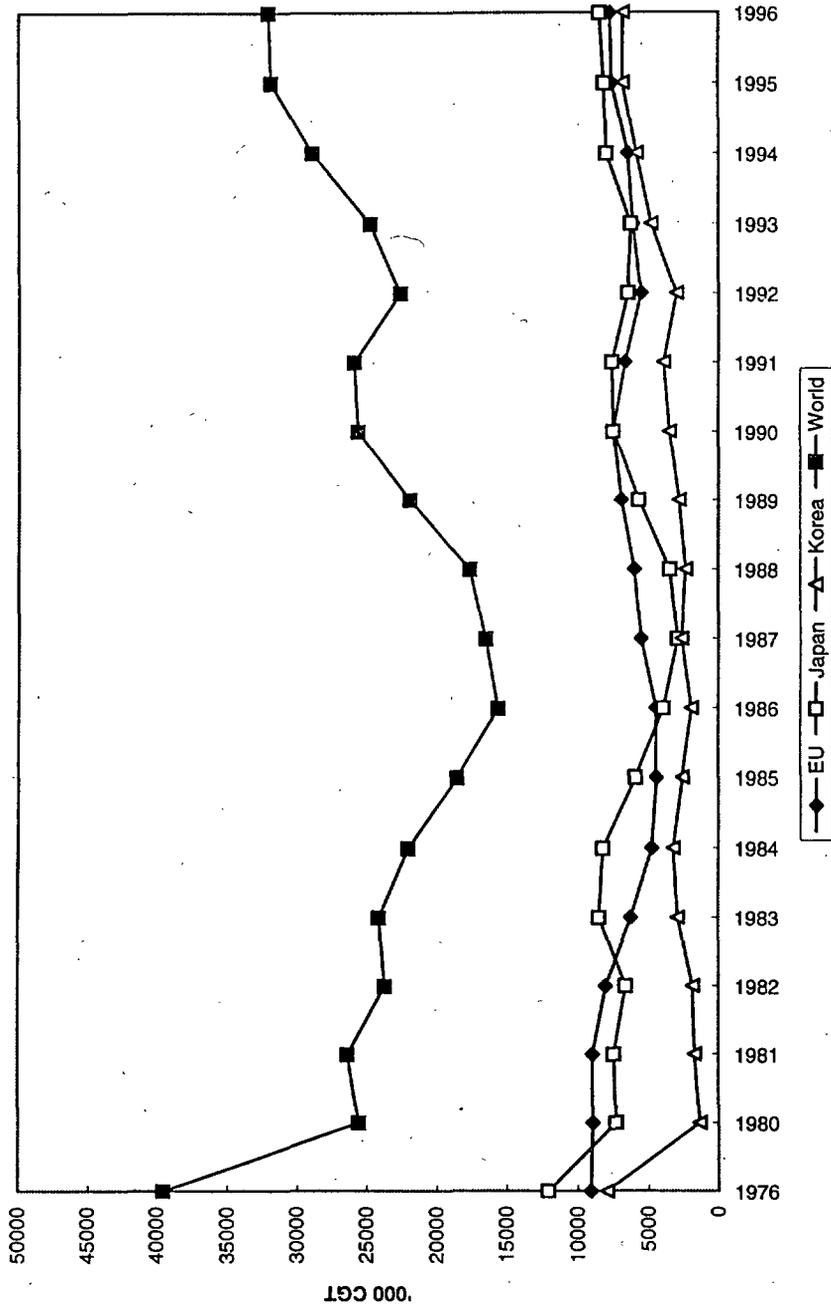


TABLE 9 - EMPLOYMENT IN THE CONSTRUCTION OF NEW VESSELS IN THE EUROPEAN UNION

	NUMBER OF EMPLOYEES																				
	1975	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
BELGIUM	7467	6614	6258	6523	6347	4680	4104	4060	3923	2995	2548	2270	2307	2377	2418	2391	1665	1655	492	0	
DENMARK	16630	12000	9000	11400	11350	11800	11200	10300	10200	7000	7000	7300	7900	8400	8600	8300	7300	9000	7700	6500	
FINLAND	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6480	6500
FRANCE (1)	32500	25300	23000	22200	22200	21600	21000	16940	15053	13700	8940	6850	6800	6600	6100	6040	5880	5910	5790	5705	
GERMANY	46839	31113	27369	24784	26521	27600	25966	22183	22260	18184	12875	14845	14732	15297	27763	28146	24143	22894	23250	20200	
GREECE	2316	N/A	N/A	2672	3393	2900	2812	2000	2000	1709	1621	1855	1535	550	0	0	0	0	0	0	
IRELAND	869	840	750	750	762	882	550	0	0	0	0	0	0	0	0	0	0	0	0	0	
ITALY	25000	20000	19000	18000	16500	13750	12800	12800	12000	11570	9500	8428	9675	9840	8299	8200	7100	8273	8877	8776	
NETHERLANDS (2)	22662	17540	14540	13100	13100	12800	11250	10330	6236	5400	3600	3500	3500	3900	4000	4000	4000	4000	4200	4200	
PORTUGAL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5370	5087	5020	4412	4245	3845	3820	3520	3150	1632	1596	1800	
SPAIN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18000	18000	17300	14000	12550	11940	11440	10735	10085	9400	8145	7665	
SWEDEN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	260	260
UNITED KINGDOM	54550	41050	31200	24800	25345	25000	20486	14655	14200	12500	11500	9000	6494	6126	5984	5820	4665	4173	4520	4043	
TOTAL EU	208833	154457	131117	124229	125518	121012	110168	93268	109242	96145	79904	72460	69738	68875	78424	77152	67988	66937	71310	65649	

- (1) From 1986 on the figure covers jobs in new shipbuilding and naval and para-naval building (conversion, naval vessels and off-shore). Figures for the preceding years using the same method are: 1975 - 32500, 1980 - 23700, 1985 - 17700.
- (2) From 1975 to 1984 including naval dockyards estimated to be: 1975 - 1800, 1978 and 1979 - 3200, 1980 - 3400, 1981 and 1982 - 3200, 1983 and 1984 - 2800
- (3) 2780 unemployed should be added to 1987's figure, 2850 to 1988's figure and 2581 to 1989's figure.
Of these 2000 represent a structural over capacity for whom no new jobs can be found
- (4) Includes naval building
- (5) Excluding jobs in Ex-GDR's yards
- (6) Of which 1838 currently inactive
- (7) Revised figure
- (8) Including 11700 jobs in Ex-GDR's yards in 1991, 12441 jobs in 1992 and 9000 in 1993
- (9) 1321 unemployed should be added to this figure, representing a structural over capacity, whose elimination is foreseen during 1992
- (10) 700 unemployed should be added to this figure, representing a structural over capacity, for whom re employment is not foreseen
- (11) 1160 currently inactive should be added to this figure

Table compiled from national sources

ISSN 0254-1475

COM(97) 470 final

DOCUMENTS

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07 15 08 10

Catalogue number : CB-CO-97-508-EN-C

ISBN 92-78-25583-1

Office for Official Publications of the European Communities

L-2985 Luxembourg