

MARITIME INDUSTRIES FORUM 2002

SHIP RECYCLING

REPORT OF THE AD-HOC WORKING GROUP

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CESA and IZAR CONSTRUCCIONES NAVALES

SLIDE 1

Good morning, ladies and gentlemen.

I am Rafael Gutierrez, from CESA, the Committee of EU Shipbuilders' Associations and, in the context of the theme of this conference, I am the Chairman of the Ad-hoc Working Group on Ship Recycling. This presentation summarises the discussions in the working group and therefore gives a broad view of the industry's views regarding ship recycling.

Before anything else, I want to give proper credit to Brian Parkinson from the International Chamber of Shipping and secretary of the Industry Working Party on Ship Recycling, who supplied us with well over half of the written and graphic material you are going to hear and see.

SLIDE 2

The life cycle for most ships lasts some 20-25 years, from the building yard, through many years of operation, till final disposal. At this time, the question is; what to do with the ship?

SLIDE 3

There are few alternatives at the end of the ship's life: Laying up only postpones the issue. Conversion to other uses presents only a limited number of alternatives; such as storage facilities, breakwaters or tourist attractions. Far too few for the many ships that must be taken out of service every year.

Scuttling has been proposed, but it is strictly controlled by the London Dumping Convention. So, recycling at the breaker's yard is clearly the best option.

SLIDE 4

Ship recycling is nothing new – the timbers of wooden sailing ships were used as building materials for houses and public buildings or as breakwaters and jetties. Only a small minority were ever allowed to rot away – there was always a residual value in ships. So it is today.

In the process of recycling ships, virtually nothing goes to waste. The materials and equipment are almost entirely reused.

Steel is reprocessed to become, for instance, reinforcing rods for use in the construction industry or as corner castings and hinges for containers. Besides, new steel production from recycled steel requires only one third of the energy used for steel production from raw materials.

Ships' generators, pumps, light fittings, furniture and other equipment are reused ashore. Batteries find their way into the local economy. Hydrocarbons on board become reclaimed oil products to be used as fuel in rolling mills or brick kilns; etc.

SLIDE 5

Ship recycling is a well-established industry, taking care of the disposal of a large majority of the world's older ships at the end of their useful life. Every year it handles about 3% of the world's fleet, with ups and downs related to the relative tightness or weakness of freight markets.

The industry is predominantly located in low-labour-cost countries with large manpower pools; the main players are India, Bangladesh, Pakistan and China, with lesser roles taken by Turkey and others. In the not so distant past the activity was also significant in Taiwan, South Korea and even in Spain.

SLIDE 6

However, media articles and environmental groups have raised in recent years some major negative issues:

The environmental degradation at or near the ship recycling areas

The dangers for health and safety of the workers at the yards

The possible violation of regulations in force regarding disposal of hazardous wastes

SLIDE 7

Worker safety and health is also reported seriously deficient. Inadequate facilities and craneage, lack of protective equipment for even the simplest tasks, handling of hazardous materials without proper precautions, all contribute to high loss of life and injury rates.

Added to this is the fact that workers live at or near the sites, and therefore in a polluted environment that also affects their health negatively.

SLIDE 8

Environmental reports indicate that the sea, beaches and air, in and around shipbreaking sites, are heavily polluted due to dumping of oily wastes and useless components, and also as a result of inadequate methods to recover valuable raw materials, such as burning the insulation from copper wire or the paint from steel, releasing PCBs and heavy metals.

SLIDE 9

Legal opinion remains divided with respect to the application of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

This international treaty prohibits the export of hazardous wastes from OECD countries to non-OECD countries, even for recycling purposes.

The argument about ship recycling regards whether a ship containing some, but not necessarily a large proportion of, potentially hazardous materials, is to be classed as 'hazardous waste' under the said convention. If so, it could not be sent for recycling before all hazardous materials were removed. This is what the environmentalists like Greenpeace demand.

SLIDE 10

There are many stakeholders involved in the solution of problems related to ship recycling.

First, the ship recycling industry, the shipping industry, their respective trade unions and also environmental interests and organisations.

Second, international or regional governmental organisations, such as: ILO, IMO, UNEP, the European Union Commission, National Administrations and Flag State Governments, all need to develop, legislate for and, importantly, enforce measures which attack the problem areas.

Last but not least, other commercial organisations like shipbuilders, classification societies, naval architects, equipment designers, need to consider possible end-of-life problems and take them into account at the design and building stage.

SLIDE 11

The shipping industry has been at the forefront taking action to improve ship recycling practices in order to avoid the above mentioned safety, environmental and legal problems.

Once made aware of the problems related to ship recycling, an Industry Working Party was created by the leading international shipowners' associations; BIMCO, ICS, INTERCARGO, INTERTANKO, ITOPF and OCIMF, with the additional participation of marine trade unions through ITF. Observers from classifications societies and the EU shipowners were also present.

SLIDE 12

In the middle of 2001, the shipping industry produced an *Industry Code of Practice on Ship Recycling* incorporating the best advice from administrations, ship recyclers and environmental groups. The Code covers those issues which the shipowners can reasonably be expected to address.

The Code encourages shipowners to ensure the following before sending their ships for recycling: to minimise the amounts of hazardous substances on board, taking away those not required for the ship's operation; to make an inventory of potentially hazardous substances on board; to deliver oil tankers and gas carriers gas-free for hot work; to identify other known environmental or safety hazards; to facilitate drainage of tanks and enclosed spaces; and to use a standard sales contract ('Demolishcon') specifically intended for the final sale for recycling.

The Code is supplemented by the *Inventory of potentially hazardous materials on board* a document to be prepared before sending a ship to the recyclers and which indicates the nature, amounts and location of all known hazardous materials left on board.

SLIDE 13

Ship recycling is currently under study at several international agencies, in order to review the need to issue regulations or guidelines related to this industrial activity.

The International Maritime Organisation (IMO) is now developing *Ship Recycling Guidelines for the Marine Industries*. Work is also ongoing on a *Green Passport* for ships. The document will be prepared by the builder, will list and locate all hazardous materials on board and is to be kept updated throughout the ship's life.

Several IMO member countries consider that voluntary regulations are not enough and are lobbying for mandatory legislation, a view shared by some maritime industries, including shipbuilders.

On the International Labour Office (ILO) side, a *Technical Guide on Safety in the Ship Recycling Industries* is under development in contact with the local authorities of ship recycling nations and their trade associations.

Finally, the United Nations Environment Programme (UNEP), as depository of the Basel Convention, is developing *Draft Technical Guidelines on the Environmentally Sound Management of Dismantling of Ships* and a document on *Legal Aspects of the Total or Partial Dismantling of Ships*.

SLIDE 14

Indeed, a basic question is whether there should be international regulations on ship recycling?

The ship recycling industry is regulated in the main by national standards. Any potential international rules will have to be enforced locally, and this will only happen if and when these rules suit the needs and priorities of ship recycling nations. In consequence, the work at the ILO is the most promising in the long run. Ten years would not be a pessimistic time frame, according to experts.

Short of that, international rules can only control the delivery of the raw materials, the ships themselves. However, the present structure of shipping makes relatively simple to by-pass any mandatory requirements on the delivery of ships for recycling.

In consequence, any short- or mid-term solution should be based on the maritime industries' voluntary agreements.

SLIDE 15

Although we have seen that it is hard to increase the percentage of recyclable materials on ships, already close to 98-99%, it should be possible to facilitate recycling with some care exercised at the design and construction stages.

Shipbuilders have been asked by other stakeholders to prepare Guidelines to be used during the Ship Design and Construction stages for: minimising the amounts of potentially hazardous materials; preparing the initial version of the Green Passport; and minimising the risks posed by hazardous materials during the dismantling operations at the recycling yards;

European shipyards are generally in favour of the Guidelines but, so far, the reaction of Far East shipbuilders has been quite cold. This is a problem, because a majority of ships are nowadays built outside Europe.

Last but not least, for any standards to be effective, universal (world-wide) acceptance and application are an absolute must, since any attempt a regional solutions might put the marine industries of that region at a serious competitive disadvantage.

SLIDE 16

Being more recyclable doesn't mean necessarily being more environmental, nor indeed safer.

Safety is usually achieved by using advanced materials and arrangements. In the case of aviation, moving from wooden frames and cloth or paper covering, to aluminium, titanium and composite panels. This permits modern planes to carry people and cargo with a fraction of the environmental impact during their operating lives. Something similar can be said of cars. Modern automobiles use less steel or wood, they are somewhat less recyclable, but they are far safer and much more fuel-efficient.

So, in shipping, shipbuilding and ship recycling we have to make choices, set our priorities.

SLIDE 17

Safety of life at sea should be an overriding consideration and it should not be compromised for the sake of facilitating the ship's operation or recycling. The crews spend the longest time on board and their safety is paramount. So are the safety of workers and shipbuilding yards, repair yards and, of course, recycling yards.

When deciding on materials or arrangements at the design stage, unsafe options should not be adopted to facilitate work at yards, be it building, repair or recycling ones.

People must realise that most of the ship recycling risks are also present at shipbuilding and ship repair, and they are met with proper equipment and procedures. For this same reason, the use of hazardous materials is already most limited during ship construction and repairs, due to concerns for yard workers safety and health.

Second, ship recycling is an essential industry to eliminate obsolete and substandard ships, and therefore is a key element of maritime safety and environmental protection, as well as of economic balance in the shipping markets. Improvements in the ship recycling industry should be compatible with maintaining a sufficient world-wide recycling capacity. A significant reduction of ship recycling capacity would probably mean higher hazards for life at sea and the marine environment than those implicit in today's ship recycling industry.

SLIDE 18

Ship recycling is an essential industry to eliminate obsolete and substandard ships, and therefore is a key element of maritime safety and environmental protection, as well as of economic balance in the shipping markets.

Improvements in the ship recycling industry should be compatible with maintaining a sufficient world-wide recycling capacity. Also, the more expensive it is to recycle a ship, the later it will be sent for demolition, and the higher will be the mean age of the world's fleet.

The persistence of older ships will depress markets, and will increase significantly the risks of loss of life and accidental pollution at sea.

This would probably mean even higher hazards for safety the environment than those implicit in today's ship recycling industry.

SLIDE 19

No matter what the marine industries and authorities do to reduce the amount of hazardous materials on board, the recycling procedures can only be controlled at the recycling yard.

Many materials are not intrinsically unsafe nor polluting, but can be mishandled in a way harmful to safety or the environment. Take electric cables, that are quite safe to handle, but emit toxic fumes when burned to recover the copper. Such a harmful recycling procedure should be forbidden by local authorities.

Other instances have mentioned the harmful emissions due to burning paint when cutting steel. But the same problem exists at all ship building and repair yards around the world, and is solved by the use of proper ventilation and/or protective breathing equipment for the workers.

In consequence, the future regulations or guidelines should deal not only with the materials themselves, but also with the acceptable procedures and the prohibited manipulations for otherwise safe materials. The procedures may be different depending on the amount or concentration of hazardous materials.

SLIDE 20

The marine industries should also avoid some naïve pitfalls. Some of the proposals in the draft standards we have seen are ill conceived.

For instance: modern accommodation panels are safe and inert. They are made with glass fibre, thin steel or aluminium plate and a very thin decorative veneer that is certified to have low heat contents and to produce no toxic fumes when burning. Then... why do the IMO draft Guidelines require shipyards to minimise their use? These panels pose no danger to handle during construction, operation or recycling, and at the same time have very good operational properties; will not burn, are sound proof, give some fire protection, are resistant to wear, are easy so manufacture and install, etc. In whose's interest is their elimination?

Another example; batteries are 25% of a portable telephone's weight, and about 2% of a car's but represent 0.01% on a typical ship. Why give them the same treatment? Isn't better to deal with bigger items first? Why is this even an issue in ship recycling?

A third example; the IMO Draft Guidelines require ship designers to provide for draining of spaces. But the truth is, all spaces in a ship already have draining provisions, and it has been that way for many decades. Now, some of these provisions may be destroyed during the early stages of dismantling, but the solution is surely to drain first and dismantle later, not to provide additional draining arrangements.

SLIDE 21

To recapitulate, an optimistic end note. We are confident that most of the serious problems we face now in ship recycling will not represent a danger for much longer. Modern ships, already have far fewer hazardous materials than older ones. Some of today's most important concerns (i.e. asbestos, TBT, PCB, etc.) will be a residual phenomenon in 5-10 years maximum. No ship will have any in 2020.

It is also unlikely that new hazards will appear, since all materials going into ships are carefully screened for the sake of shipyard workers and seafarers. More care will be exercised about recyclability of shipbuilding materials too.

The maritime industries have recognised the need to provide better information on potentially hazardous substances to the recycling yard. The IMO, ILO and UNEP are now working towards developing international standards applicable to the recycling industry and all stakeholders are now aware of the issues involved, addressing working

conditions, the health and safety of the workforce and the need for environmental controls.

However, the key element for improving both environmental protection and workers safety and health and to protect the environment in the ship recycling industry will be the participation of the administrations of countries where this industrial activity takes place.

SLIDE 22

Many thanks for your attention.