



Ship recycling: green versus greenback

Over the next quarter of a century, an average of 1400 ships per annum will be scrapped. But is there enough 'green' awareness and capacity to recycle them properly? And what are the wider implications, including cost? These were key questions addressed at the recent Ship Scrapping & Recycling congress in London organised by Lloyd's Maritime Academy.

In May 2009, after five years of negotiation, a diverse collection of shipping authorities, human rights and environmental organisations, as well as ship recyclers and shipping companies, adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. Despite widespread opposi-

tion, the International Maritime Organisation (IMO) succeeded in obtaining the signatures of 59 countries for this initiative whose goal is to improve ship recycling standards.

The Convention will enter into force 24 months after the date on which 15 states, representing 40% of world merchant shipping by gross tonnage, have either signed it without reservation as to ratification, acceptance or approval or have deposited instruments of ratification, acceptance, approval or accession with the IMO's Secretary General. And that could be a long time from now!

To the relief of representatives from Alang, Chittagong and Gadani - the hubs in, respectively, India, Bangladesh and Pakistan where 80% of the world's ships are dismantled - the beaching of worn-out vessels for recycling will

be allowed to continue. For their part, environmentalists and US/European ship recyclers complained that the Convention could be used to legitimise the scrapping of tankers and freighters under 'poor circumstances'.

'...a small step ahead'

One of the speakers at the congress was Arjen Uytendaal, Director of the International Ship Recycling Association (ISRA). This organisation, which promotes sustainable ship recycling, was founded in October 2007 and 'combines the strongest responsible yards of the globe adhering to IMO, Basel Convention and ILO (International Labour Organization) guidelines', he said. Open to all countries, members of ISRA are drawn from many parts of the world, including



Breaking up of the Royal Navy ship HMS Fearless at the yard of Van Heyghen Recycling in Ghent, Belgium.



Dirty work – sludge removal by hand.

China, Turkey, the USA, the Netherlands, Mexico, the UK, Germany and Hong Kong. Wide-ranging membership standards are applied, covering for example workers' health and safety. Requirements imposed on members also include the effective collection, storage and disposal of hazardous and non-hazardous waste and an effective system to prevent pollution of the sea, water and soil.

'Some, like Greenpeace, say the IMO Ship Recycling Convention is a major step backwards; some, like the IMO, say it's the right balance; but ISRA says it's a small step ahead,' observed Mr Uytendaal. Among the advantages of the Convention, he pointed to agreement of internationally-recognised requirements, to reporting lines from recycling state to flag state, and to a formalised, updated hazardous inventory list as well as a ship recycling plan.

However, Mr Uytendaal expressed reservations about the Convention's proposed surveys, certification and port state control concept on the grounds of uncertainty as to how this will develop. Notably, he voiced concern over Chapter 3 regulation 15.1 of the IMO Convention which states: 'Each Party shall establish legislation, regulations, and standards that are necessary to ensure that ship recycling facilities are designed, constructed, and operated in a safe and environmentally sound manner.' ISRA's Director commented: 'We fail to see how you can construct a beach to comply with this regulation.'

Need for additional guidelines

According to Mr Uytendaal, companies within the EU's 27 member states own 40% of the world's ships but only 25% sail under an EU state flag. 'In order for the IMO Convention to be adopted, it requires ratification by the EU, India, China, plus one large flag state like Panama or Liberia,' he suggested.

According to the report entitled 'An EU strategy for better ship dismantling' which has been adopted by the EU Council, the EU should play a major role in the process towards developing ecologically and environmentally sound ship-breaking. The IMO Convention is an important step in phasing out unsafe and harmful working methods - including unsafe aspects of beaching, the EU has acknowledged.

But there remains an urgent need to develop additional guidelines which call for early voluntary

actions by all stakeholders, the EU has also said. EU member states have been urged to ratify the convention as a matter of priority; to date, however, only France has done so. The EU also argues that 'negative effects on the competitiveness of the EU shipping industry must be avoided'.

The EU wants further investigations to take place in relation to several aspects of the IMO Convention. These include: a study on early transposition; an additional study on when ships are declared ready for recycling (list of 'green' facilities); and an assessment of the economic, social and environmental impact basis for next steps. The European Commission has signalled its willingness to adopt the IMO measures in 2010. However, issues such as financial compensation and the founding of a ship dismantling fund should also be discussed, it says.

Reverse the toxic tide

It should come as no surprise that 'green' organisations took the opportunity provided by the Ship Scrapping & Recycling congress in London to argue that the IMO Convention does not go far enough. Ingvild Jenssen, Coordinator of the NGO Platform on Shipbreaking which represents 15 green and human rights action groups including Greenpeace and the Basel Action Network, told delegates: 'We have to reverse the toxic tide and achieve green and safe ship dismantling.'

According to the Platform on Shipbreaking, guiding principles for achieving this are: the polluter pays and producer responsibility; substitution and prevention; national self-sufficiency; environmental justice; and common but differentiated responsibilities. To avoid

'The human cost of breaking ships: one accident every day, one death every week.'

(NGO Platform on Shipbreaking)

exploitation of loopholes in the IMO Convention, Mrs Jensen urged exporting states, importing states and transit states, as well as flag states, port states and recycling states, to implement the Basel Ban Amendment adopted in 1995 which prohibits exports of all hazardous wastes - including end-of-life ships - from EU and



State-of-the-art shipbreaking yard in Jiangyin, China, with fixed and floating cranes.



The Graythorp Yard on the outskirts of Hartlepool in the UK, home to Able UK's, Teesside Environmental Reclamation & Recycling Centre (TERRC).

OECD countries to developing countries for disposal or recycling.

The Platform on Shipbreaking also came forward with proposals to 'set a new course' in ship scrapping. These include: respecting existing international standards; setting up independent certification and auditing of ship recycling facilities; establishing a fund to internalise costs within the shipping industry; and banning dismantling of ships on beaches.

Lay-up and scrapping

Since the onset of the world economic and financial crisis in the autumn of 2008, a substantial proportion of the global commercial shipping fleet has either been laid-up or scrapped because of the drastically reduced demand for goods around the world. According to Wilhelm Magelssen, Marketing Director and Senior Vice President of Norwegian classification society Det Norske Veritas, 600 new shipbuilding contracts had been cancelled as per October 2009. Meanwhile, 1550 vessels had been laid-up or idled and 970 vessels had been scrapped.

Mr Magelssen gave delegates an insight into the cost differential between the laying-up and the breaking of ships. He also raised the question of what to do with old tonnage in the current market, comparing the cost of lay-up and scrapping. He drew a distinction between warm

Beaching: four fatal flaws

According to the NGO Platform on Shipbreaking, there are four flaws to the current method of scrapping ships on beaches, notably in India, Pakistan and Bangladesh. They are:

- * The impossibility of containing pollutants on a tidal beach where hulls of ships are often breached accidentally or by cutting, sending persistent organic pollutants, heavy metals and oils onto the beach.
- * The impossibility of rapidly bringing emergency response units, including fire-fighting equipment and vehicles, ambulances and cranes, to remove persons hurt inside the hull and alongside the vessel in a shifting and soft tidal surface.
- * The impossibility of allowing cranes to work alongside to lift the heavy, cut sections of a ship and thereby of preventing heavy objects from falling on persons or directly into the marine environment.
- * The incompatibility of conducting hazardous waste management (as ships contain and are often even painted with hazardous materials) in the ecologically delicate and vital coastal zone.



lay-up (suitable for up to 12 months out of service with a one-week reactivation) and cold lay-up (suitable for up to five years out of service with a three-week reactivation).

According to Mr Magelssen, market conditions will dictate if warm lay-up, cold lay-up or scrapping/recycling is applied. During the decision-making process, the age of the ship and the likelihood of scrapping after lay-up must be taken into account. And consideration should also be given to the market outlook as well as to new rules and regulations. 'Economically, it will most probably be better to take the old ships directly to scrapping - and avoid cold lay-up - since the preservation costs will be relatively high,' he concluded.

Responsible shipbreaking

A different view on ship recycling was provided by Wouter Rozenveld, Business Development and Ship Recycling Operation Manager at

Rotterdam-based Maersk Ship Management (MSM). 'At the basis for all AP Møller Maersk's shipbreaking activities is constant care for the environment,' he declared.

His presentation focused on ship recycling practices in China where most of MSM's ships are scrapped. According to Maersk's philosophy, ship recycling is a corporate responsibility for: flag states; owners; owners' states; yards; yards' states; ship managers; and classification agencies.

Mindful of its own responsibilities, Maersk began a ship recycling research project in 1997 with the objective of finding environmental and healthy alternatives to beaching; the company considers beaching to be an unacceptable approach to shipbreaking.

Ultimately, the company decided to focus on the Jiangyin shipyard in China where, between the years 2000 and 2008, it recycled 26 ships. Last year, MSM contracted 20 ships.

In 2008, MSM also started offering its services to third parties and received many requests from ship owners who wanted to have vessels scrapped in an environmentally friendly way. These owners were looking for solutions because they had no expertise in selling for recycling, in the IMO and Basel regulations, ILO guidelines or in creating a green passport. In some cases, they needed data on the cost of 'green' versus 'non-green' shipbreaking. In short, they wanted to know where they could find 'green' yard capacity.

Three stages

According to Mr Rozenveld, MSM's recycling services offer many benefits, including: full control by one party, namely MSM; supervision of health, safety and environmental (HSE) aspects; and waste management control (also when it leaves the yard).

'There are three stages in MSM's shipbreaking process - the pre-arrival planning, sale and last-voyage co-ordination, and post-delivery procedures,' he explained in London.

During pre-arrival planning, a list of toxic substances is made, an asbestos, radiation and toxic material survey is carried out, and a ship-specific recycling plan is finalised. At the sale and last-voyage stage, MSM conducts market research and takes care of the negotiations between owner and buyer, as well as of delivery documentation and procedures. It also co-ordinates the final voyage and the delivery. Following the arrival of the vessel at the scrap

yard, MSM looks after post-delivery procedures such as customs clearance, removal of loose items and fittings, asbestos and hazardous material removal, tank cleaning, steel cutting and site clearance.

Serious implications

Implementation of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships will have serious implications, Mr Rozenveld warned. 'Ship recycling yard owners and operators will have to improve their facilities on HSE, while ship owners will have to make a ship-specific recycling plan,' he said. 'Furthermore, it will impact new and existing ships, it will require new certificates by flag states (classification bureaux) and it will require better planning for last voyage.'

MSM expects that, over the next 25 years, an average of around 1400 ships per annum will be recycled. Mr Rozenveld concluded: 'We - Maersk and our external clients - are ready and still improving. We accept lower prices and a loss when compared to beaching. We accept the responsibility of paying for the disposal of hazardous materials. For us, liability goes beyond the point of sale.' □



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