

Ship recycling in Turkey a working compromise

When a ship enters Turkey's Aliaga Bay, it is either bringing oil to the refineries, delivering scrap metal to the steel mills or on its way to becoming scrap itself. This final voyage can be observed from start to finish from the offices of Leyal Ship Recycling which overlooks the 29 plots that make up Aliaga's ship recycling industry. These days, Turkey is showcasing vessel dismantling as the main offshoot of the country's new 'green' direction.



The contradiction between ship owners looking to earn a quick buck for their scrap tonnage and the aims of 'green' governments/non-governmental organisations (NGOs) has created lively legislative debate over recent years within the International Maritime Organisation (IMO), the Basel Convention and the European Union. But a down-to-earth solution is to be found in Turkey where ship recycling at Aliaga represents a practical compromise between the interests of ship owners, environmentalists, politicians and end markets.

To start with a conclusion: the business potential is clear for Aliaga's ship recyclers. Their yards are tidy and organised while their bay location offers easy access to the Mediterranean Sea and is ideal for accepting general cargo ships, bulk carrier ships, passenger ships, car carriers and even VLCCs (very large crude carriers). The 21 companies work together through an association and are just a few kilometres away from steel manufacturers who are always hungry for the heavy steel scrap derived from ships.

Totally different

'If you had come here 15 years ago, the situation was totally different,' concedes Adem Şimşek, head of the largest family-run dismantling business Simsekler. Back in those days, he says, conditions were generally similar to those found today in Bangladesh and India: oil was spilled into the sea, asbestos removal was done by hand and worker safety was well below European standards.

Aliaga had been operating this way since the 1970s but 'things changed in the late 1990s', according to fellow scrap yard operator Dimitris Ayvatoglu, when environmental organisations such as Greenpeace started to ask governments and ship owners why they allowed unsustainable ship dismantling procedures. These bodies, along with the media, were the main drivers in raising global awareness of the issues.

Aliaga's ship dismantlers were forced to change their approach, not least because they were leasing their 50-metre-wide plots from local authorities who had the power to close down their operations. In effect, yard owners were coaxed into taking the next step of creating an environmentally-competitive outlet for their mainly European ship owner clients. Attention focused on developing a proper management system for hazardous materials such as asbestos, PCBs, refrigerants and oils, leading to the arrival of new equipment from Germany and also European-trained employees.



In 2009, 179 ships have been recycled in Aliaga, Turkey.



From left: Adem Şimşek and Dimitri Ayvatoglu.

Combined effort

The new approach centred on combining the efforts of the 21 recyclers belonging to the Turkish Ship Recyclers Organisation. This Aliaga-based body registers, removes and stores hazardous wastes from ships and, among its other functions, serves as a sector spokesman when dealing with the government, completes 'formal paperwork' and operates safety procedures. Members pay a fee to the association to fund this work - a much cheaper approach for them than training their own personnel or buying their own safety equipment. The head of the association is Mr Şimşek, who says: 'Experience has been so good we currently also serve as a scrap dealer to the steel industry. We now can offer higher volumes for better prices.'

And the benefit for regulators is that they need to control only one organisation rather than 21. This collaboration has seen Turkey become a prominent outlet for European government ships, for regional ship owners and for green-conscious shipping companies. Mr Ayvatoglu of Leyal Ship Recycling explains: 'We are located in a large industrial zone. There are hospitals, police and fire stations nearby, it is very easy to rent additional equipment if needed, and we are a few kilometres away from our end market.'

Ship recycling safety in Pakistan explored at UN Workshop

The Turkish government and the country's ship recyclers have demonstrated a desire to share their experiences with the world's more under-developed vessel dismantling nations - and that's why they have become highly-regarded participants at some of the specialist international conferences and meetings on this subject.

In co-operation with the United Nations Environment Programme (UNEP), the Ship Recyclers Association of Turkey recently hosted a workshop for Pakistani government officials and recyclers with the aim of highlighting the improvements made within Turkey's ship recycling industry and of implementing practical, regulatory and institutional changes back home in Pakistan. The three-day event entitled 'Ship recycling technology and knowledge transfer' ended with progress being made on strengthening the understanding of the Basel Convention's role in the international regulatory regime of ship recycling.

One of the key discussion points raised at the meeting in Izmir, was the lack of downstream waste management solutions in Pakistan. In contrary to Turkey, the country has no capacity to dispose hazardous material -like asbestos and PCB's- in a sustainable way. Main conclusion: it's the governments task to develop a basic nationwide waste management structure, which can be used by all Pakistan industrial sectors, including ship recyclers.

The IMO Hong Kong Convention stops regulating at the fence of the ship recycling facility, but Pakistan's recyclers will meet to a great extent the requirements of the IMO Convention, when they invest in infrastructure, equipment investments and training within their yards. Meeting the requirements of other conventions regarding hazmat disposal -such as the Basel Convention- is a much wider and difficult issue for Pakistan, experts say. Combined, the countries of India, Bangladesh and Pakistan currently account for 70-80% of the world ship dismantling market.

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Ships are pulled ashore by giant cables and 'sliced like a salami.'

Stream of vessels

Despite these pluses, some 40% of Aliaga's annual ship dismantling capacity of around 1 million t is still available to fill. Despite the global economic crisis forced ship owners to take their older vessels out of service, which meant that Aliaga's dismantlers were faced with a stream of incoming ships, most of the obsolete vessels were headed for the Indian sub-continent. This year, 230 ships are expected to meet their end at Aliaga compared to 171 in 2009 and 126 in 2008. Generally, vessels for scrapping are run or towed on to a non-tidal 'beach' yard covered with concrete plates. Steel wires gradually pull the ship further up the shore while torch cutters slice it 'like a salami'. A crane drags the large metal pieces into the body of the yard where they are cut into 75 sq cm pieces ready for use by steel smelters. Non-ferrous metals are sold to Izmir's scrap processors, cables are processed by a licensed company and electronics are collected by Exitcom, Turkey's leading e-scrap recycler. Other hazardous materials are incinerated or landfilled by national hazardous waste processor Izaydas. 'It's all about operational procedures, and we try to employ them the best way we can,' explains Mr Ayvatoglu. 'I am not directly opposing "tidal beaching" because everything is related to working standards and procedures. But the way they operate this in India, Pakistan and Bangladesh, there's a lack of structure to their system.' Everything in ship recycling comes down to mentality and the willingness to invest in better machinery and training of workers, he adds. In tidal beaching, there is no ready access for mechanic equipment, due to the muddy surface. All the water which comes in sweeps the contaminating elements from the beach.

'Cannot compete on price'

But still, a large majority of ship owners are bypassing Aliaga for the higher prices available from South Asia. 'It is true,' Mr Şimşek acknowledges, 'we cannot compete with them on price. While they offer US\$ 400 per t, we can offer only around US\$ 250.' Each yard can store and break more than one ship 'but there are no "second" ships available,' adds Mr Ayvatoglu.

But ship owners and governments across Europe can see that Turkey's vessel recyclers are participating in congresses and meetings at a high political level and that the country is one of the main drivers behind the International Ship Recycling Association which serves the interests of responsible ship dismantlers.

Turkey's shipbreakers are largely satisfied with the Hong Kong IMO Convention's responsible ship recycling guidelines adopted last year, not least because they force ship builders and owners to register the contents of a vessel such that constituent material percentages can be easily calculated. 'It will be of help to us if we know beforehand how much asbestos is on a ship,' explains Mr Ayvatoglu. Most of Aliaga's recycling companies are already meeting the requirements of the IMO Convention, and this is not asserted by us, but also from officials of the IMO, Basel and ILO', he adds.

EU membership hope

As long as the global ship demolition market continues to be dictated by price, Turkey's ship recyclers will remain on the margins and will still attract only around 3% of the world's scrap tonnage. The number of yards in India, Bangladesh and Pakistan has increased in recent years, resulting in fierce competition and higher prices. For Aliaga's operators, hopes are pinned on Turkey joining the EU and on this providing a major stimulus for Europe's ship owners to dismantle their vessels in Turkey. At the Bay of Aliaga, Turkey's ship recyclers have built a showcase for operations which are closely controlled by the Ministries of Environment, Maritime Affairs and Labour. Although environmental groups still favour dock-based recycling, a compromise has been found. The next step for Turkey will be to increase its ship recycling activities, stimulated by international enforcement. At present, its efforts are being rewarded by increasingly positive attention from the media, the international authorities and even fellow ship recyclers in other countries. □

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Scientific driven ship recycling

There's a lack of data when it comes to a scientific driven approach to sustainable 'green' ship recycling. A collaborative project funded by the European Community is aimed to provide a holistic understanding of ship dismantling through the combination of requirements and impacts (with associated procedures and processes) from pertinent social, technical, economic and environmental drivers into a single, integrated and validated decision support tool (database).



The 'DIVEST' project officially started in 2008 and is scheduled to last 36 months, until July 2011. The project is being delivered by an international consortium of twelve partners (a mix of universities, research institutes and industrial players) from nine different countries, the project budget is Euro 3.4 million for a contracted funding level of Euro 2.5 million.

The project will provide a core, validated and practical definition of ship dismantling that will be common to and useable by all stakeholders. Through practical on the ground case studies (collection of environmental data in India and Turkey undertaken over a full twelve-months period) and training, as well as through the involvement of non-European partners into the Project Consortium, DIVEST will facilitate technological improvement and the betterment of human and environmental conditions in countries involved in the study.

www.divest-project.eu

