Materials to recycle

Materials of a sailing or motor yacht which can be recycled include:

- Polyester / Kevlar: Sails
- Aluminium: Rig, Mast, port lights
- Fibreglass: Hull
- Wood: Furniture, Hull, Deck
- Nylon: Ropes, (Spinnaker) Sails
- Stainless steel: Deck equipment (e.g. winches, guard rails), port lights
- Steel: Engine components, hull with steel ships
- Plastic: Instrument covers, kitchen utilities, sanitary components

One big challenge with recycling of sailing yachts appears to extract and prepare material which is sufficiently clean to be recyclable at all.

Many recreational boats today consist of composite materials, for instance. Composites meaning a combination of polyester and fibreglass, resulting in strong and concurrently lightweight material. Big disadvantage when it comes to disposal: Composite material is all but easily processed thus far, due to the special molecular structure of the composite. Here is a very well prepared document describing the composite recycling challenges in detail; starts at page 26, “disposal routes for composites”.

And there seems to be some real good news. Science Daily magazine published an article about ship recycling in June 2011 where a group of cooperating companies has reached promising results. With support from the Research Council of Norway, several firms, among these Norway-based SINTEF, got together and conducted experiments to recover composite materials. They succeeded at a rate of 80% material recovery, more or less. Quoting one participant: “The results are now available, and are very good… During the course of the project, SINTEF has developed different methods and found a chemical process that makes it possible to separate the polyester and fibreglass so that both products can be reused…The level of usability varies from property to property, but is around 80 per cent. And best of all is that the process is easy to implement in an industrial context. Within two hours, more than 80 per cent of the material has been dissolved and the temperature during the process does not exceed 220 degrees.”

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