



Advantages of an aluminum built catamaran yacht

Sustainable, unique: Aluminium at CATAMARIS®

Not all aluminium is the same: CATAMARIS® only processes aluminium of class 5083 H 321/H111 certified by "German Lloyd, Bureau Veritas or Lloyd's Register". Only this material has the best corrosion and seawater resistance. High strength, stable, temperature resistant from -270 degrees to + 80 degrees, absolutely non-combustible.

Painting or surface treatment is basically not necessary (but of course possible), even after a collision there is no corrosion. It has an excellent surface protection with its natural aluminium oxide layer.

Sanded aluminium hulls, when perfectly crafted as at our team partner, Dijkstra Shipyard, result in a flat surface that satisfies some customers without the need for further colour design. Hulls made at Dijkstra are very well welded, resulting in a plain surface that hardly needs any sanding.

However, various painting or foiling systems are also available, depending on the customer's requirements for the optic of the surfaces.

More than 1,000 high-speed ocean-going catamaran ferries and ocean cruisers with hulls and deck superstructures made of aluminium are in use. Yachts made of aluminium have a high resale value as used yachts

Light, strong, robust and durable, easy to repair and maintain, aluminum is the ultimate choice material for ship- and yacht building.

Lightness and resistance

Aluminum construction allows hulls and superstructures to be built both strong and light.

Due to its exceptional properties of strength and resistance, an aluminum hull can take more of a beating than for example a polyester one. Aluminium material will allow a great deal of deformation before actually breaking. It will dent before it will crack.

An aluminium hull, constructed with multiple sections and profiles - each with specific advantages for specific requirements - at CATAMARIS is always reinforced around the waterline and at the bow tips to prevent damage from the impact of ice or other obstacles.

These are reassuring extras, especially for voyages to northern or southern hemispheres where drift ice is to be expected, or to other "adventurous" waters, as well as in the event of collision with floating containers or other flotsam.

An aluminum boat is therefore safer and better suited to blue water sailing.

Durability

Aluminum also offers the advantage of an incomparable longevity. Little maintenance is required and the structure does not deteriorate over the years. An aluminum boat does not have a lifetime limit. Another major asset of aluminum is its remarkable resistance to corrosion.

High resistance to corrosion

The Aluminum-alloys that have been in use in the nautical industry for many years now have proven their high resistance to corrosion and to the structural fatigue. The state of the current knowledge of aluminium qualities do not only allow to determine the life cycle of a structure in aluminium; experts consider its longevity as almost permanent.

Since the likely sources of galvanic (or other) corrosion on aluminum hulls are well known, preventive measures have been intergrated in all aspects of the Aluminium Yachtbuilding process. Special alloys for use in Marine environments have been developed. Possible sources and structural solutions that might be subject to corrosion have been redesigned and eliminated. Electrolysis by contact between aluminium and (stainless) steel parts are no longer a problem in a vessel well designed by qualified architects and well built by a shipyard specialized in aluminium such as Dijkstra Yachtbouw.

Of course the quality of work (perfect insulation between the material) and controlled welding procedures will also have a direct impact on the results. Electricity on board a yacht has to be designed and managed by professionals, who know how to insulate materials and electrical equipment in order to minimize risks.



Our CATMAR 5, 6 and 7 are built in Holland by our team partner Dijkstra Yachtbouw, who have been specialising in the construction of aluminium catamarans for 17 years. Dijkstra Yachtbouw is certified by "Germanischer Lloyd" and "Bureau Veritas". This is also where aluminium pilot boats and utility catamarans for offshore wind farms are built. Ships that operate 365 days a

year in all weathers and sea states: Proven technology, expert work, professional, certified quality!



Comfort

The robustness of an aluminum hull is reassuring. Resilience to cracking is vastly superior to other materials. It does not creak at sea.

Another advantage is that no dangerous vapours accumulate in enclosed spaces (smell of styrene in polyester boats).

Forming a protective oxide shell automatically, it is not required to add a protective paint-layer to Aluminium surfaces, eliminating the risk of evaporating paint-solubles in the vessel.

Higher flexibility of design

No expensive moulds are required for ships made of aluminium. Aluminium offers more possibilities for the design of the rooms than e.g. GRP, because bracing transverse bulkheads are not necessary with an aluminium construction due to the strong construction with frames and stringers.

The room layout, the interior and exterior design, the deck and flybridge can therefore be designed more freely according to the client's wishes.



Safety

Safety at sea is a major concern for every owner. Aluminum will not catch fire and does not fuel a fire. And, as mentioned before, its resilience to impact is a huge advantage. It will 'give' before it will break. A reassuring thought.

Resale value

Aluminum boats are extremely sustainable and keep their value on the resale of the boat, because the structure does not wear out and does not deteriorate over time. No osmoses possible.

Environment

Since Aluminium is 100% recyclable without degrading, retaining 100% of its original material properties, it is significantly more environmentally friendly than oil-based products like Polyester and Epoxy.

75% of all Aluminium ever produced is still in use today, and recycling Aluminium requires significantly less energy compared to the original production process.

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