

Sailboats

Lorenzo Ciccarelli

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Renzo Piano gained his experience of water and the sea from handling sailboats.

Over the years, designing and building boats developed from a personal passion to a true activity paralleling his work as an architect. He turned to it as a personal “school of construction, a living laboratory for experimenting”. Born and raised in a city on the sea, from an early age Piano was naturally attracted to the task of building boats, testing the solidity and strength of materials, and studying how to join and bond them. Then boats afford outstanding opportunities to design minimum habitable spaces, in which the measurements are not made in meters, but centimeters and millimeters. This interest in minimal spaces spans the Genoese architect’s whole career and was embodied in the Diogene housing module he developed for Vitra in 2013.

Piano built his first boat in 1960 while studying at the Polytechnic in Milan. He has designed six more watercraft over the following decades. He describes how “I built the first boat (...) in marine plywood with my own hands: the classic situation in which you then have to break down the door to get it outside. The second was made of laminated wood, after which I built one out of ferrocement.” This passion, personal and professional at the same time, took the form of a pamphlet in 1984. Only a single known copy survives, kept in the Renzo Piano Foundation and titled *Sperimentazione applicata al settore nautico* (“Experimentation Applied to the Nautical Sector”).

In building boats, Piano has experimented with different materials, testing their behavior under extreme conditions of stress, to verify the methods of processing and using them. This knowledge has proved highly useful, flowing into his architectural

Photo1_Resolute Lady drawing’s detail.

Photo2_Didon I, the first boat.

Photo3_ Didon II’s launching.



work. The laminated wood technique adopted in Didon II (1965) would return in projects in the following decades, from the arch sections supporting the pyramidal elements in transparent polycarbonate of the traveling pavilion designed for IBM (1982-86) to the roofing of the Rome Auditorium (1994-2002). Ferrocement had been used experimentally since the thirties by Pierluigi Nervi, who also applied it to boat building from 1945 on. Piano first used it to build the Didon III (1971) and then, ten years later, to model the “leaves” roofing the Menil Collection (1982-86) in Houston. It appears again in the more recent canopy measuring 100 meters per side that crowns the Cultural Center of the Stavros Niarchos Foundation in Athens (2008-2016). And again, iroko – a rare species of African wood with special properties of drying and toughness – was tested in the keel of Resolute Lady (1982), then chosen for the cladding boards and framework of the Jean-Marie Tjibaou Cultural Center in Noumea (1991-98).

His experience in building small sailboats led Piano to spend a lot of time in shipyards, first at Pegli and then in Genoa. His youthful experiences have left a profound mark, with many of his buildings in the following decades seeking to recreate the feverish atmosphere he experienced in the ports of western Liguria. See, for instance, the reconfiguration of the Old Port of Genoa (1985-92); the National Center for Science and Technology NEMO in Amsterdam (1992-97); the Luna Rossa headquarters in the docks of Valencia (2005-06); the Astrup Fearnley Museum (2006-12), which reclaimed the area of the old Oslo shipyards, or the new Botín Center (2010-2017) located on Albareda quay in Santander. At the same time, these projects are aimed at the reconquest of delicate areas of contact between land and sea, often closed to

Photo4_The third boat, Didon III.

Photo5_Resolute Lady sailing boat.



the city, after decommissioning of the productive activities that animated them.

In the shipyards of Monfalcone, in Friuli Venezia Giulia, Renzo Piano became involved in the design of the superstructure of the Crown Princess cruise liner (1987-1991) for Fincantieri. This mighty ship – at the time one of the largest of its kind, capable of carrying 1680 passengers, with gross tonnage of 70,000 tons and overall length of 245 meters – was given with a characteristic dolphin-backed line, the head of which corresponds to an aluminum roof, light and perforated, covering a large hall that serves as a place for socializing and entertainment for the ship’s guests. This is a space open to the sea, but at the same time protected from the wind by the special shape of the roof – 60 meters long and 30 wide, built, as we have seen, entirely of aluminum. Its structural ribbing, and that of the high decks, are made from a special material that required more than a year of experiments conducted with Fincantieri’s engineers and shipyard workers. Once again the design of boats and the assiduous and passionate experience of shipyards proved to be a useful laboratory for learning the secrets of materials and their fabrication.

Photo6_The Crown Prince Vessel.

Photo7_The upper deck of Crown Princess.



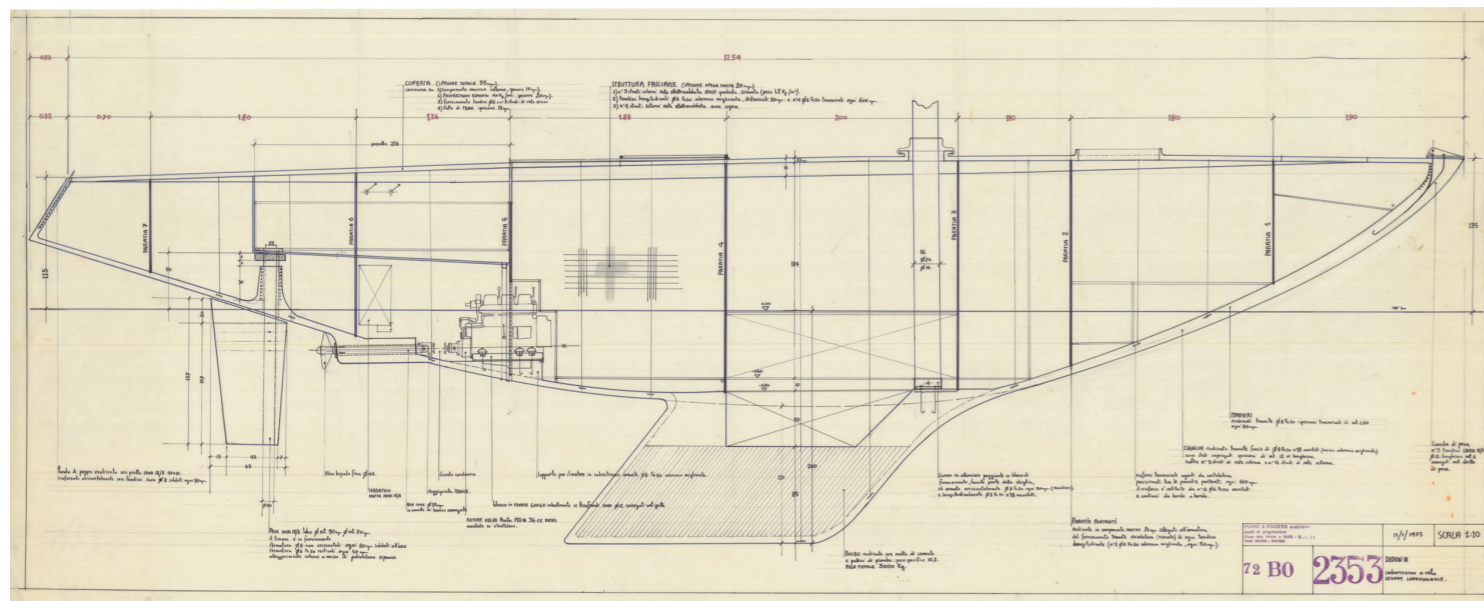
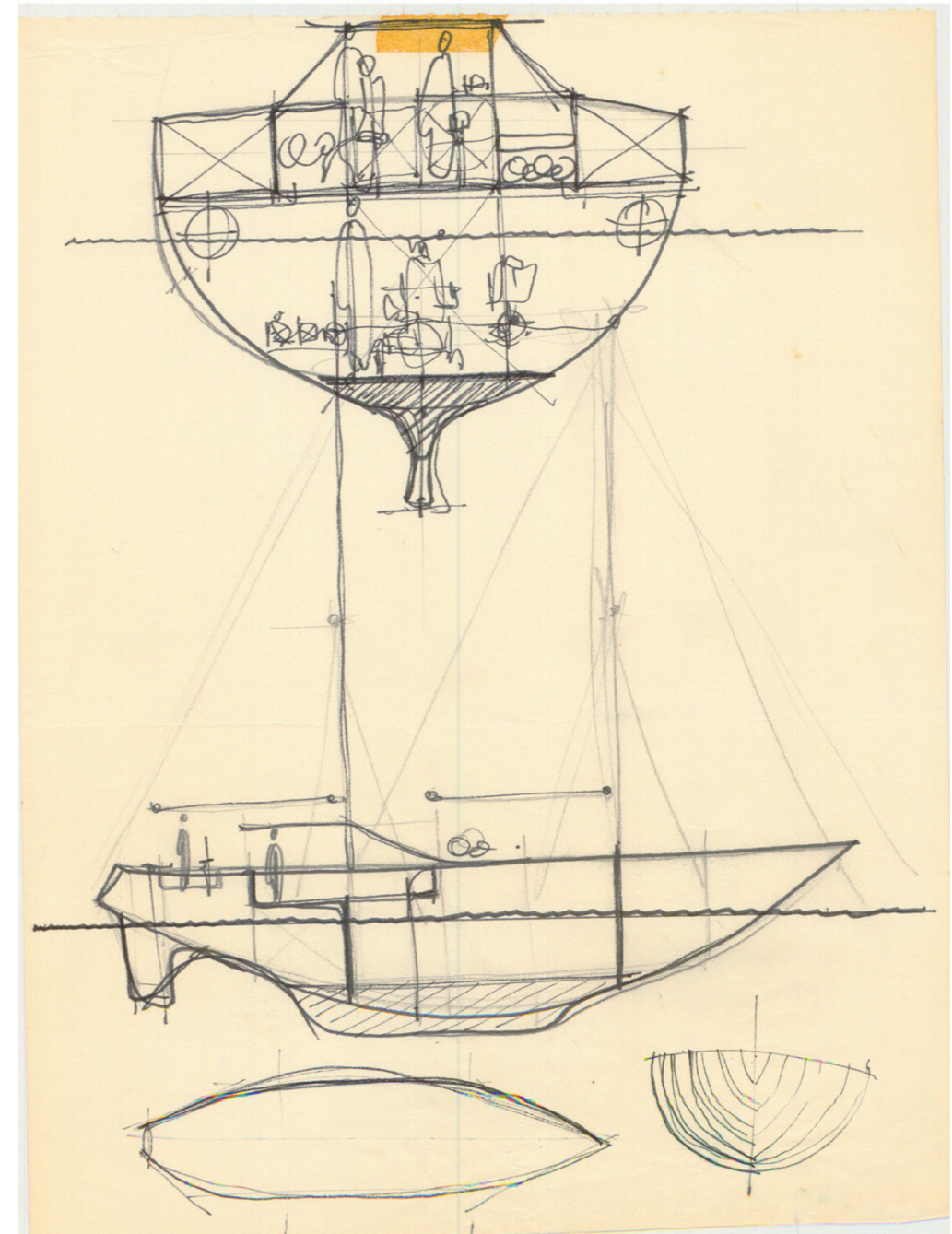


Photo8_Section plan of Didon III, with the ferrocement hull.

Photo9_Study for two masts sailing boat.



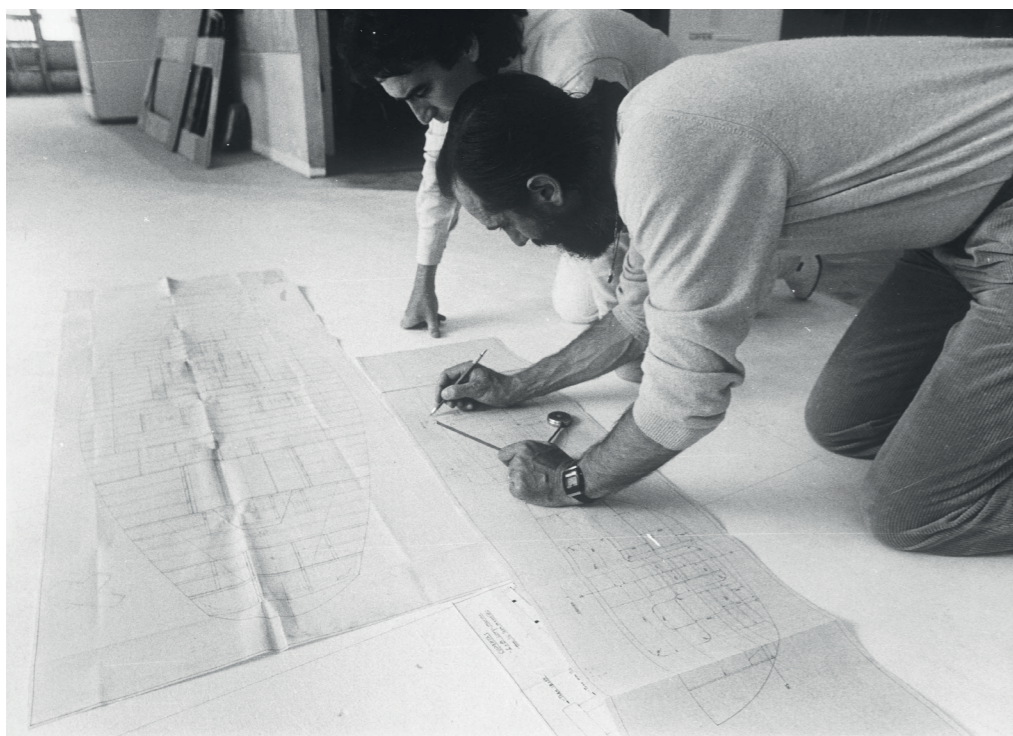


Photo10_Renzo Piano at work on Resolute Lady.



Photo11_Resolute Lady hull under construction.

PHOTO CREDIT

Photo 1, cover_Resolute Lady drawing's detail, 1982.

Resolute Lady, 1982/1984

Renzo Piano Foundation Archives, Res__009

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Photo 2, page 3_The boat Didon I, 1962/1964.

Didon I, 1962/1964

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Photo 3, page 3_The launch of Didon II, 1967.

Didon II, 1966/1967

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Photo 4, page 5_The boat Didon III, 1973.

Didon III, 1971/1973

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Photo 5, page 5_The boat Resolute Lady, 1984.

Resolute Lady, 1982/1984

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Photo 6, page 7_The cruise vessel Crown Princess, 1991.

Italian Passenger Ship. P&O Crown Princess & Regal Princess, 1987/1991

Renzo Piano Foundation Archives, Fin__008

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Photo 7, page 7_The Crown Princess upper deck, 1991.

Italian Passenger Ship. P&O Crown Princess & Regal Princess, 1987/1991

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Photo 8, page 8_Didon III' section, 1973.

Didon III, 1971/1973

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Photo 9, page 9_Study for a two masts sailing boat, 1974.

Sailing boat Studies, 1973/1982

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Photo 10, page 10_Renzo Piano at work on Resolute Lady project, 1982.

Resolute Lady, 1982/1984

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Photo 11, page 11_Resolute Lady's hull under construction, 1982.

Resolute Lady, 1982/1984

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