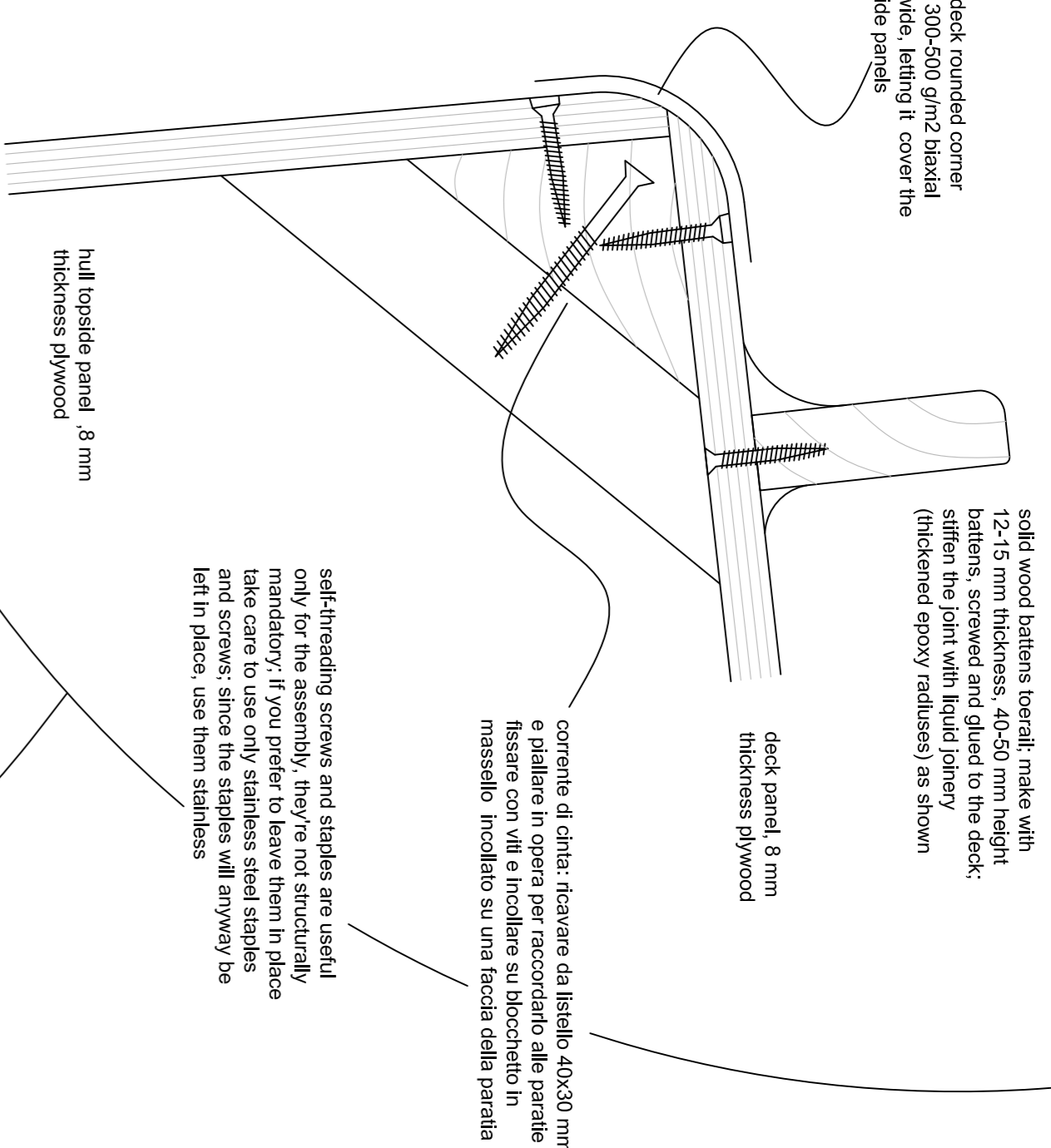


cover the hull deck rounded corner with a layer of 300-500 gr/m² biaxial glass epoxy resin. If it covers the deck and top-side panels



self-threading screws and staples are useful only for the assembly, they're not structurally mandatory. If you prefer to leave them in place take care to use only stainless steel staples and screws, since the staples will anyway be left in place, use them sparingly

The bulkhead depicted in this drawing is the n.5, but the building details are valid for each bulkhead ; we suggest you to read this drawing together with the n.4 ; details are in 1:1 and 1:2 scale, while the bulkhead is in 1:5 scale

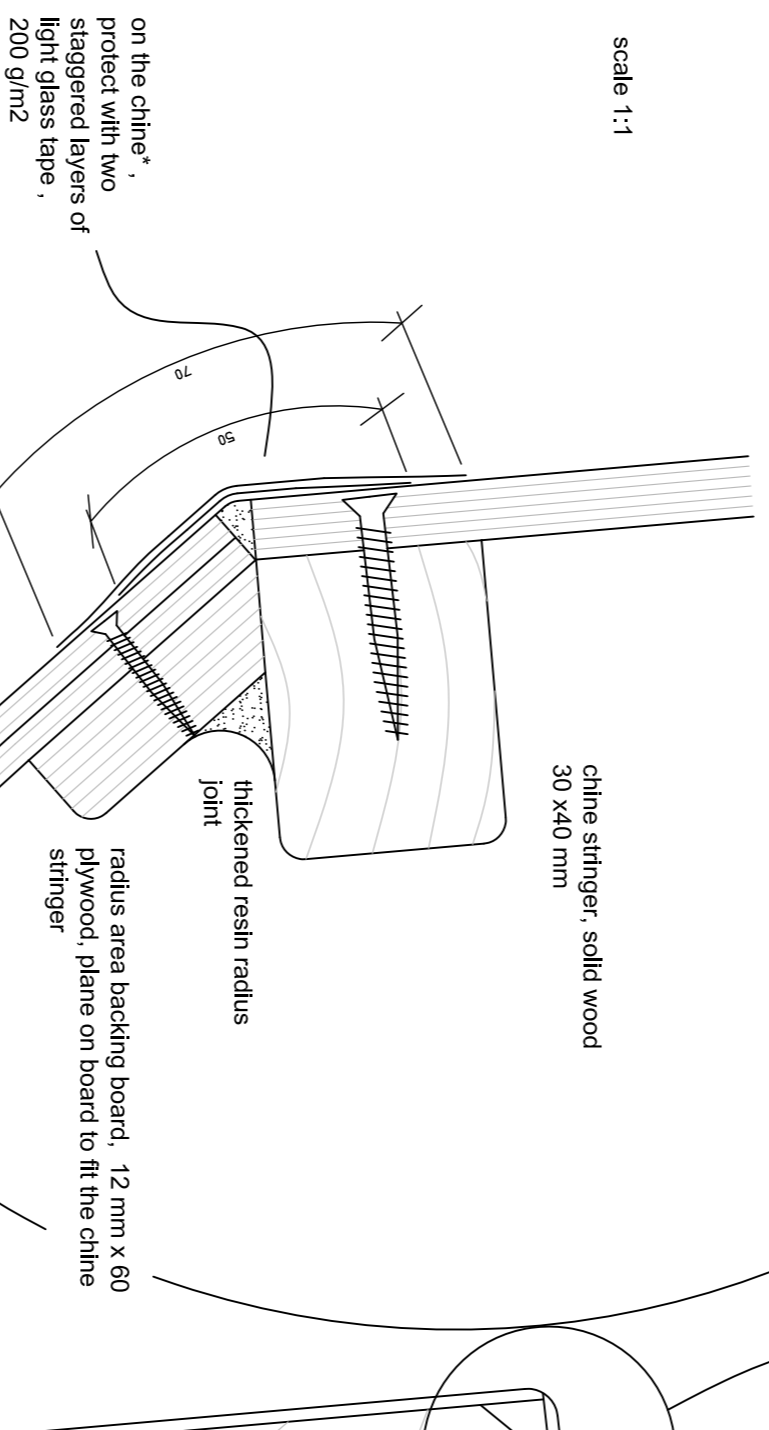
epoxy structural gluing and glass tape sheating:
 -all works with glass fabric have to be made with wave roven glass fabric, or biaxial fabric (better the second one), weight 500 gr/m², tape/patch width 5, 10 cm or intermediate
 -on the bulkheads-hull panels joints make a thickened resin radius and then laminate a single layer of glass tape , width 70 mm, both on the forward and on the after side
 -make a thickened resin radius among all the stringers and the hull panels (glass tape not required)
 -between the keel beam and the bottom panels, make a large resin radius and a double glass layer (see below for detail)
 -behave with floors as they're bulkheads: so epoxy radius and glass among them and bottom panels; for keel case floors see drawing 14
 -among bulkheads and keel backbone, make a large epoxy radius and a double glass layer
 -for bilge drainage see below in the details

hull glass sheating: a complete hull glass sheating is not required for structural reasons, it's a good idea to cover the radius area with a light (200-250 gr/m²) layer of biaxial glass epoxy laminated, to have a better and longer lasting fairing

deck stringers: 30x20 mm solid wood, glue in the notches on the bulkheads

hull top-sides : 8 mm thickness plywood

scale 1:1



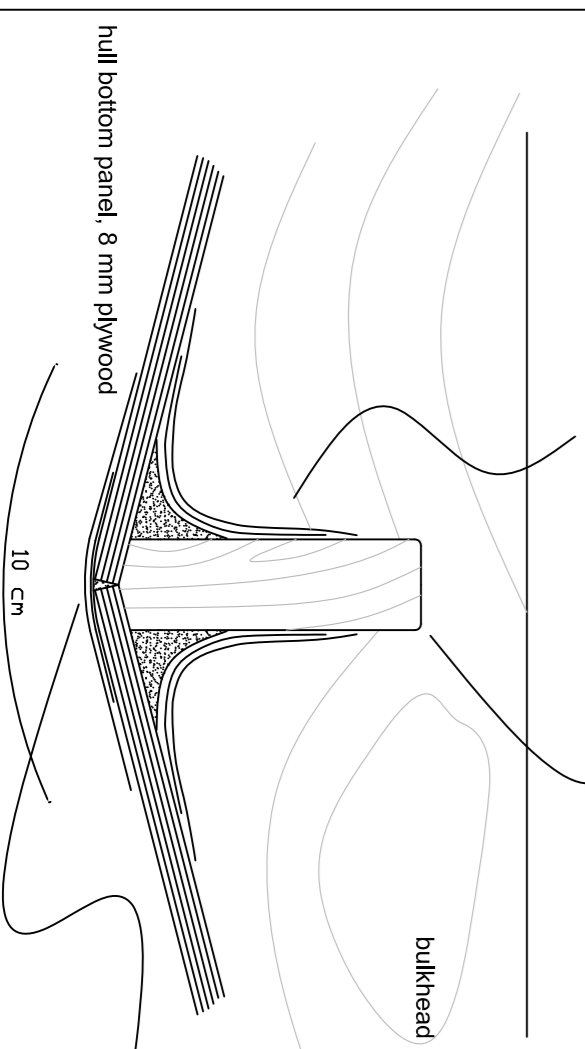
on the chine', protect with two staggered layers of 200 gr/m² tape .

chine' : keep an approximate 3 mm radius form bulkhead 4 to stern, and a wider one forward of bulkhead 4; chine tends to wash going forward, between bulkheads 2 and 3

scale 1:2

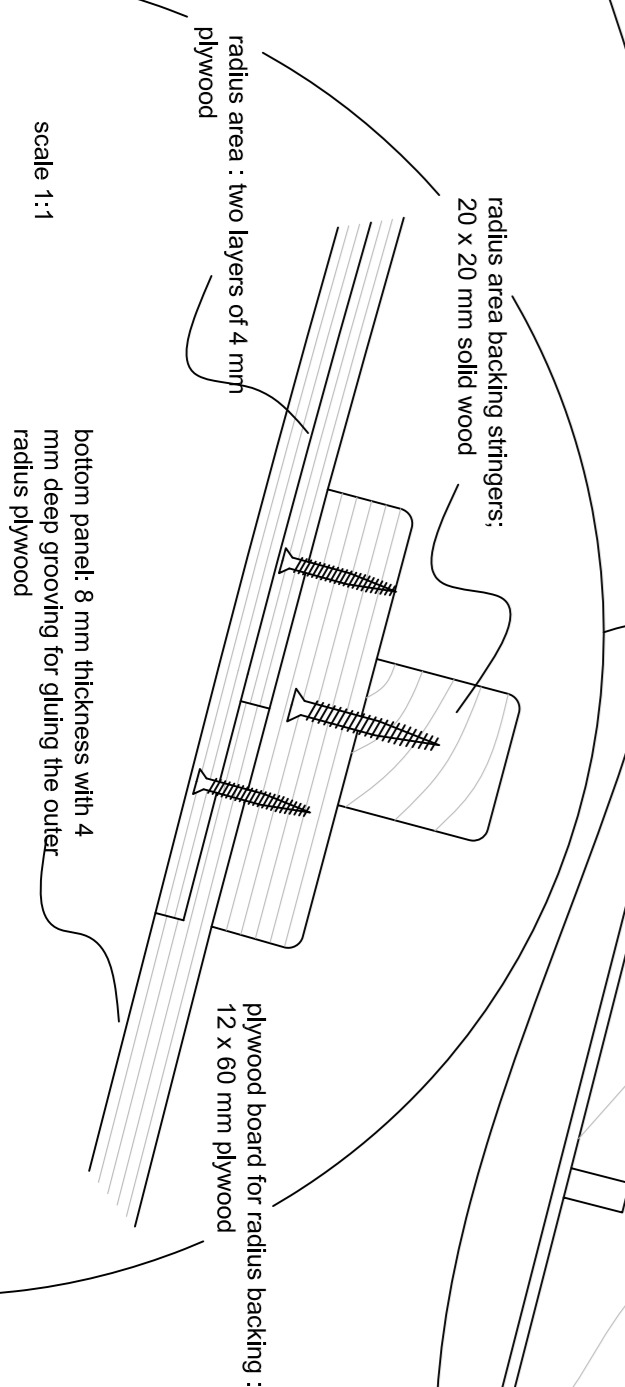
keel backbone-bottom panels joint: large radius liquid joinery and then two layers of biaxial

bulkhead



round the bottom panels on joint, fill the void on the centerline with thickened epoxy and then cover with two staggered layers of biaxial glass

scale 1:1



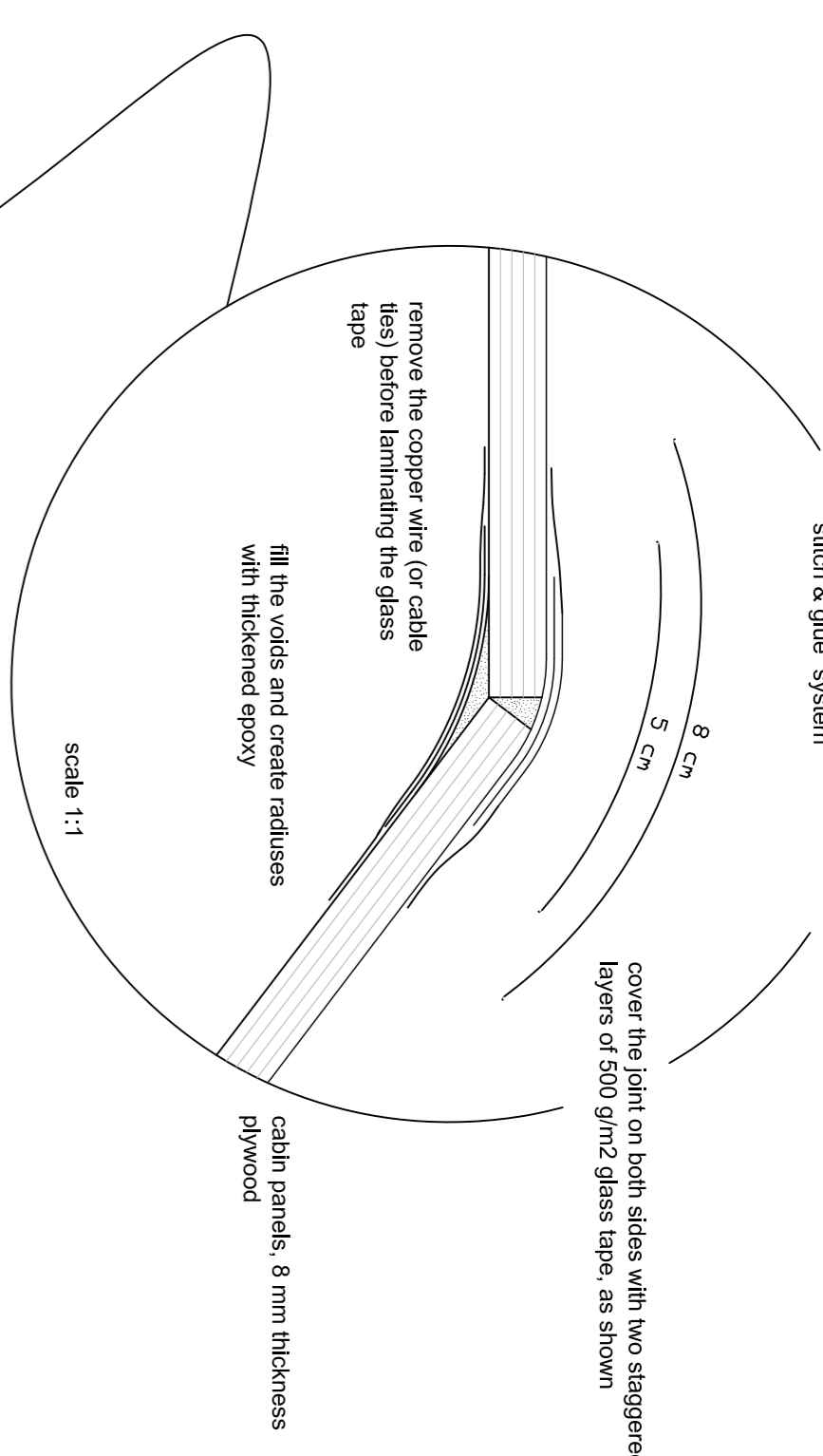
scale 1:1

cockpit stringers: solid wood 20 x 30 mm section

scale 1:1

limber holes drain scheme: to have a proper water flow fill the bilges, make a 10 mm diameter hole between stringers and bulkheads from side to side; make holes after the liquid joinery and glass taping works. The hole diameter is 10 mm, the distance between them is 100 mm. The hole is filled with liquid resin to avoid scattering the plywood of course without resealing the hole

joint among cabin panels with 'sillon' & glue system

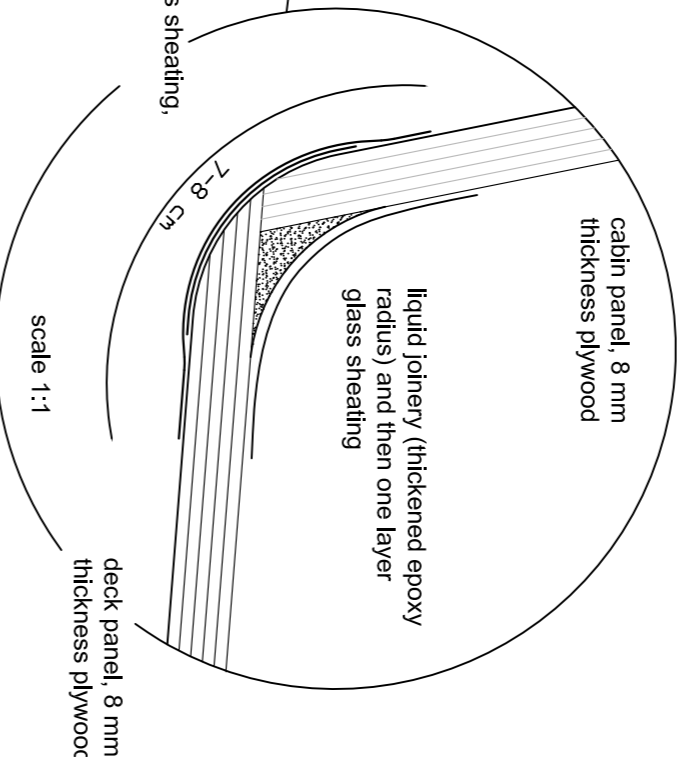


cover the joint on both sides with two staggered layers of 500 gr/m² glass tape, as shown

scale 1:1

Internal glass sheating, two layers

scale 1:1



fill the voids and create radusses with thickened epoxy

top-sides stringers: solid wood 30 x 30 mm section, glue on the notches cut in the bulkheads

assembly scheme for all the stringers of hull and cockpit: dimension of stringers are not always the same)

stringer 30x30 mm, glue in the notch cut in the bulkhead

fasten the side panels on the stringers with screw (temporary) and/or stainless steel staples (can be left in place)

scale 1:1

hull side panel, 8mm thickness plywood

limber holes drain scheme: to have a proper water flow fill the bilges, make a 10 mm diameter hole between stringers and bulkheads from side to side; make holes after the liquid joinery and glass taping works. The hole diameter is 10 mm, the distance between them is 100 mm. The hole is filled with liquid resin to avoid scattering the plywood of course without resealing the hole

hull bottom stringers: 20x 40 mm solid wood, glue in the notches cut in the bulkheads

scale 1:1



design by:
 Cristian Pilo

IDEA 21
 structural details, generic bulkhead
 STUDY PLANS SCALE 1:5, 1:2, 1:1

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