Sakiko Noda: Patchworked Tea Cave

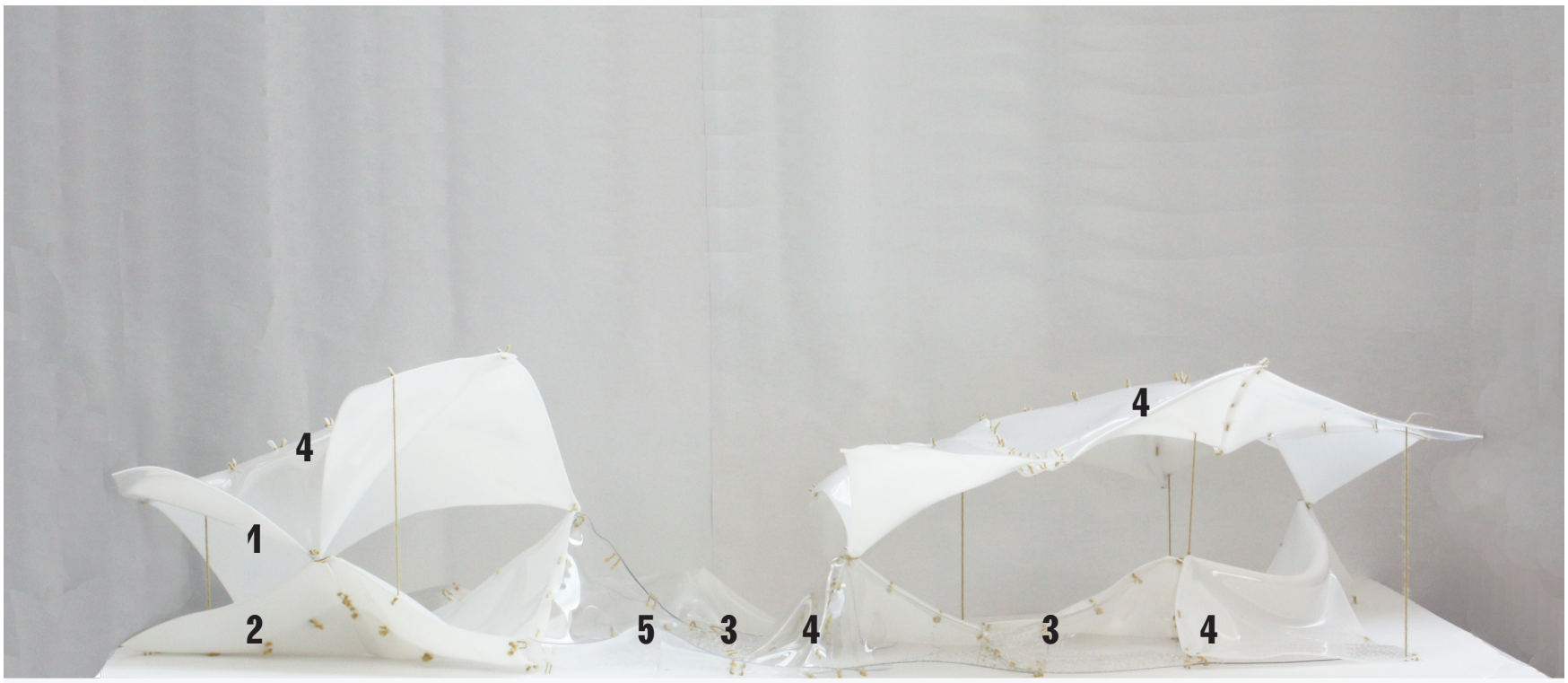
Patchworked Tea Cave

PET sheet (polyethylene terephthalate) is used for the prototyping, by hanging the light transparent sheets up with threads, and heating them in an oven. PET gets softer and bigger in size; it deforms itself from 2 dimensional to 3 dimensional with fluctuations on its surface. Also, the structure gets harder and sometimes opaque, thanks to the crystallization induced by heat or stress-strain.

Multiple heated samples are connected together with threads, using the ripples on the sheets to lock each other. The flexible joints supports the thermal movable structure as a boundary condition. The structure gets stable even with gaps between samples. The thickness depends on the load the sheet has to support. Diverse curves and fluctuations are represented everywhere in and out of the space. A slab can function as a wall, or a wall can function as a ceiling; different architectural elements are continuously connected.

The samples bring a soft and intimate space for teahouse. Transparent public pathways are flat with rough surface, and the mat bumps alongside offer places to gather, have a seat and chat. The reflection gives an estrangement for contemplation. In contrast, the closed private places with opaque roof above are tranquil and have small openings to let people in. The floor is mat finished for the sake of barefoot. The warm temperature and moisture of tea inside go out through the gaps and create atmosphere for tea appreciation outside, too.

Spatial conditions and the fragments.

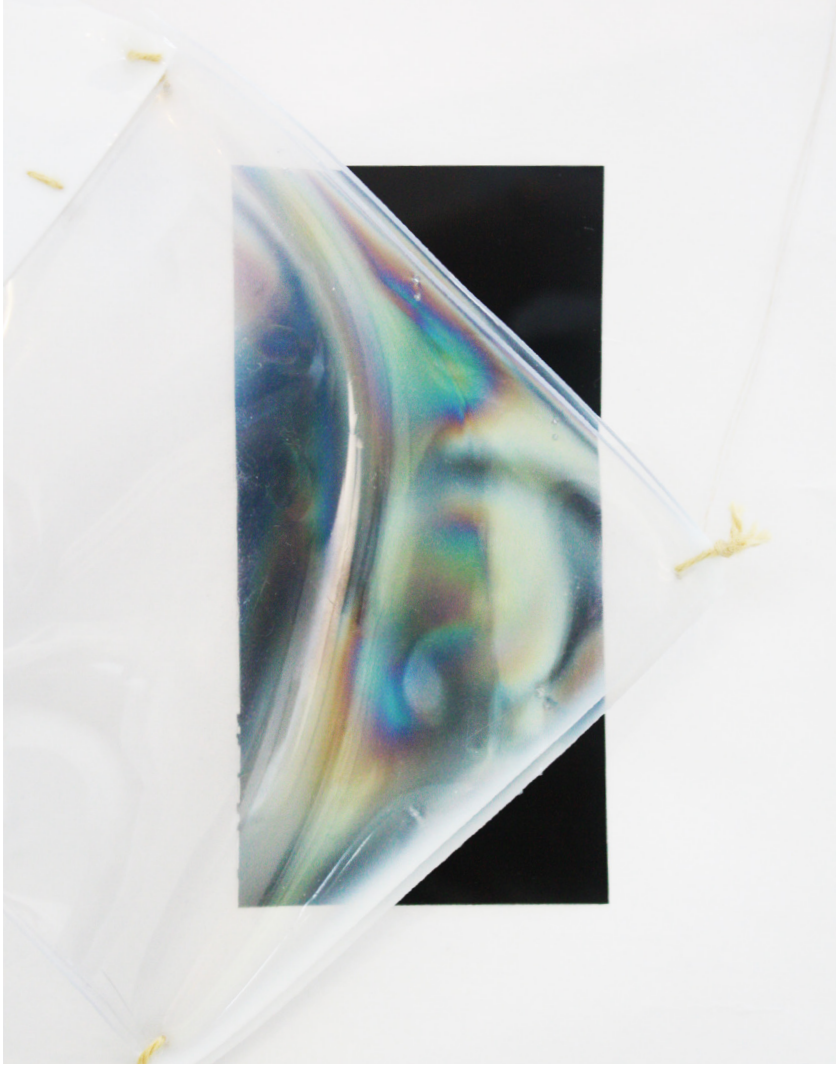


Warm, moist atmosphere for contemplation

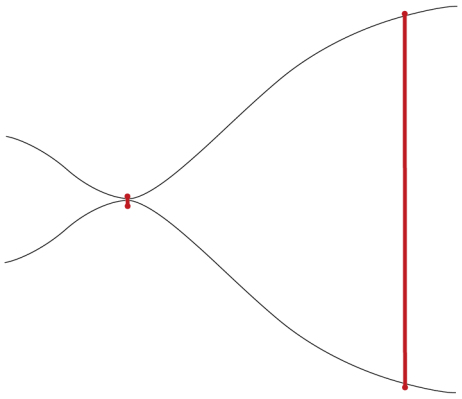
Before heating, hung up model with threads

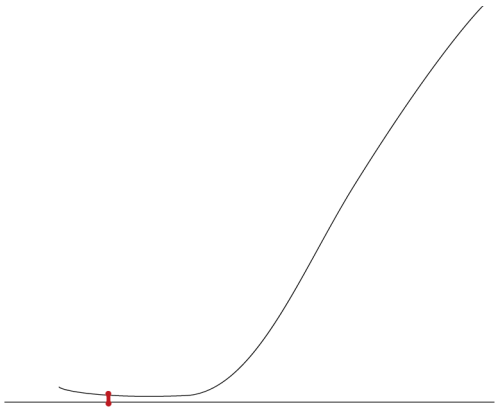
After heating

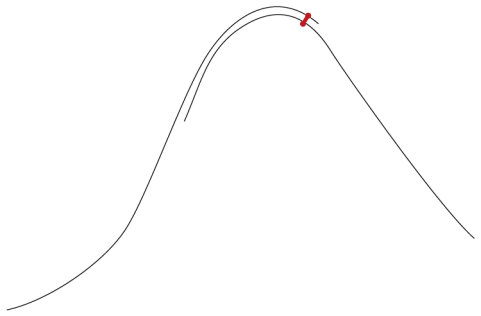
Crystallization by heat



Crystallization by stress, visible by polarizer







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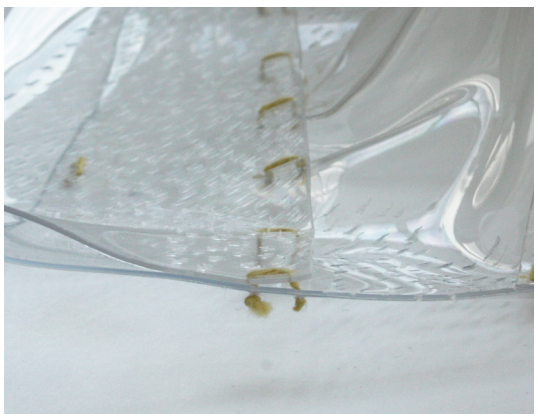

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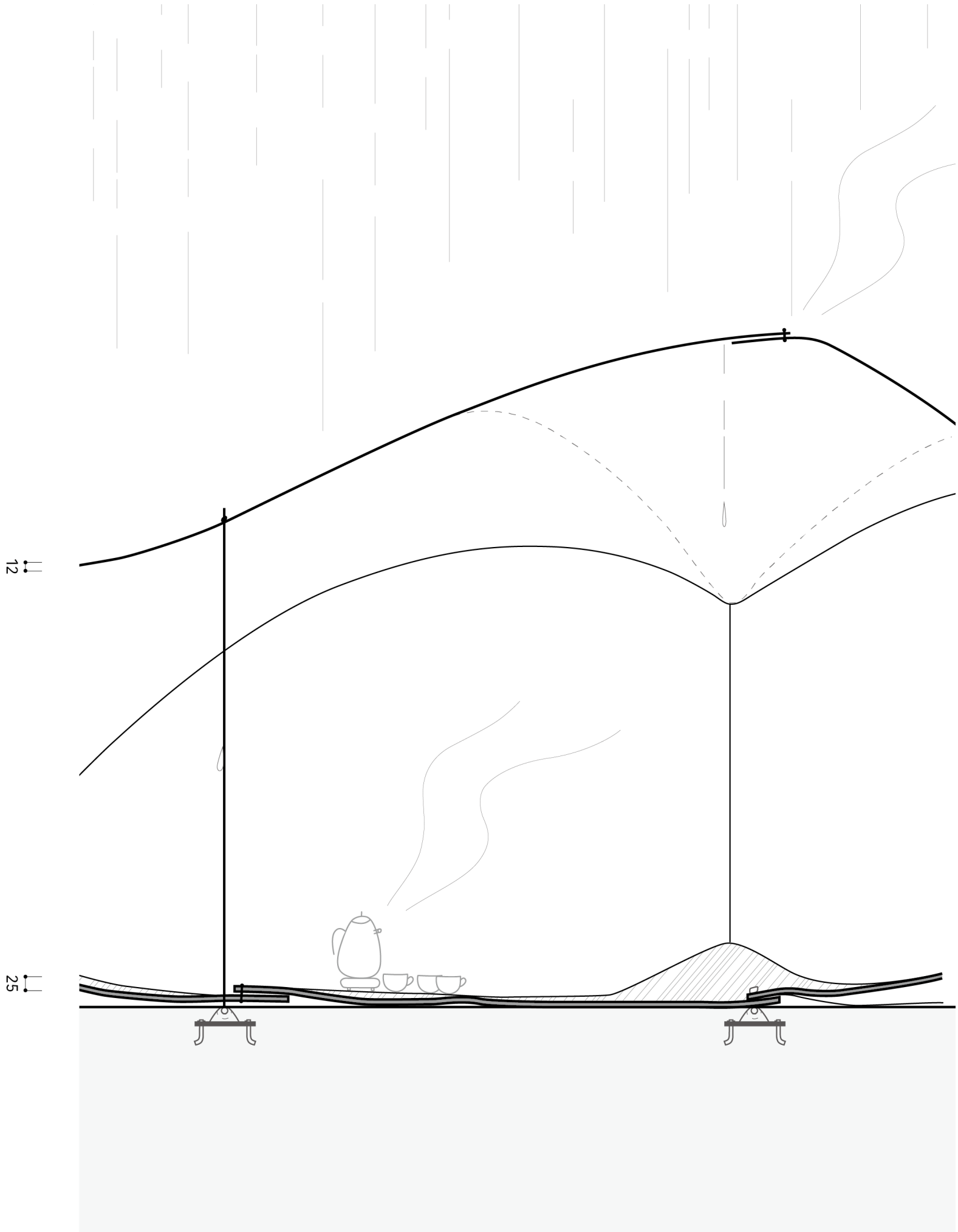
3D joints: connecting different elements

1 slab - wall - ceiling
2 column - ceiling
3 slab - wall

2D joints: layering sheets

4 simple layers
5 random layers - thicker and more stable



Detail section
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