

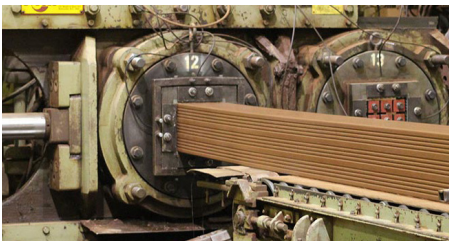




EXTRUSION PROCESS

The extrusion is a process used to create objects of a fixed cross-sectional profile. A material is pushed through a die of the desired cross-section. The two main advantages of this process over other manufacturing processes are its ability to create very complex cross-sections.

The process allows for the extrusion of different materials, based on the same principle. The most common materials used are metals and plastics; such as aluminium tracks and plastic tubing. But also with food, such as pasta.



EXTRUSION DIE

3D modelled and printed dies to attach to the playdoh extruder, the bespoke dies were a means of experimenting and learning from the process. When the stencils through the die were too thin, the clay would contort and bend; it would also be difficult to extrude. One of the main issues was the fragility of the machine, since it was designed to extrude playdoh. With clay, the handle deformed and elements of the extruder were stiff from the dried out clay.



EXTRUDER PROTOTYPE

In response to the play-doh extruder tests, I wanted to create larger extrusions and have more control over the outcome. Using a caulking gun and adapting it slightly created the force required for extrusion. Initially, lasercut acrylic pieces were used; however, they often cracked under the pressure. I created SLS printed caps and stencils, which also allowed for hollow shapes to be extruded; which created different forms.

Using a more portable form allowed for different types of manipulation as the clay was extruded. I was interested in the way a jig or movement could play with the final form. For example, pushing the clay against a flat surface and extruding in stop/start movements.

There were idiosyncracies that emerged between the forms - a result of the uniqueness of each extrusion, even with the same die. There is an curious relationship between the process, which used on an industrial scale as a means of mass production of identical objects, and the domestic scale which is evident here. The creases and cracks are celebrations of this process. The forms are scale-less, and can represent any sized element from cutlery to facade or building.

PIPE



ADAPTED
CAULKING GUN



EXTRUSION DIE 1.0
LASERCUT ACRYLIC



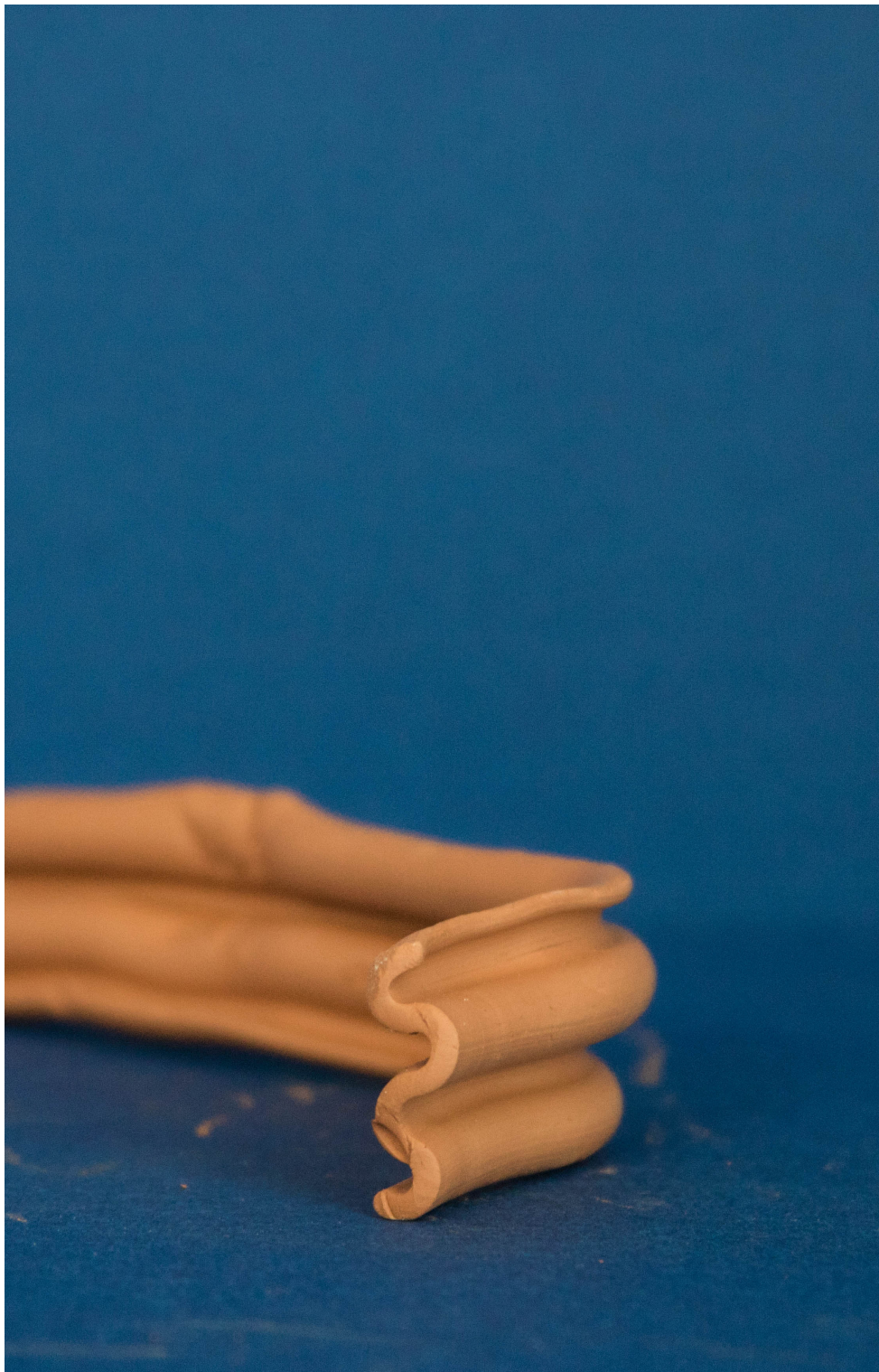
EXTRUSION DIE 2.0
SLS PRINTED



CATALOG OF EXTRUSIONS



















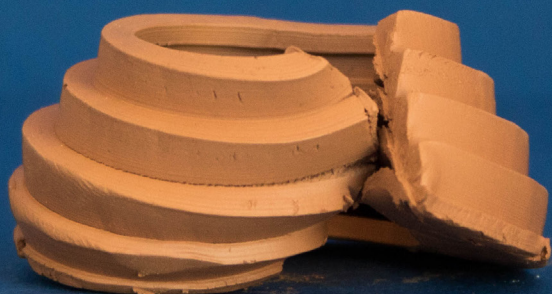






























SCALE EXPERIMENTS

1:500



1:100



1:50

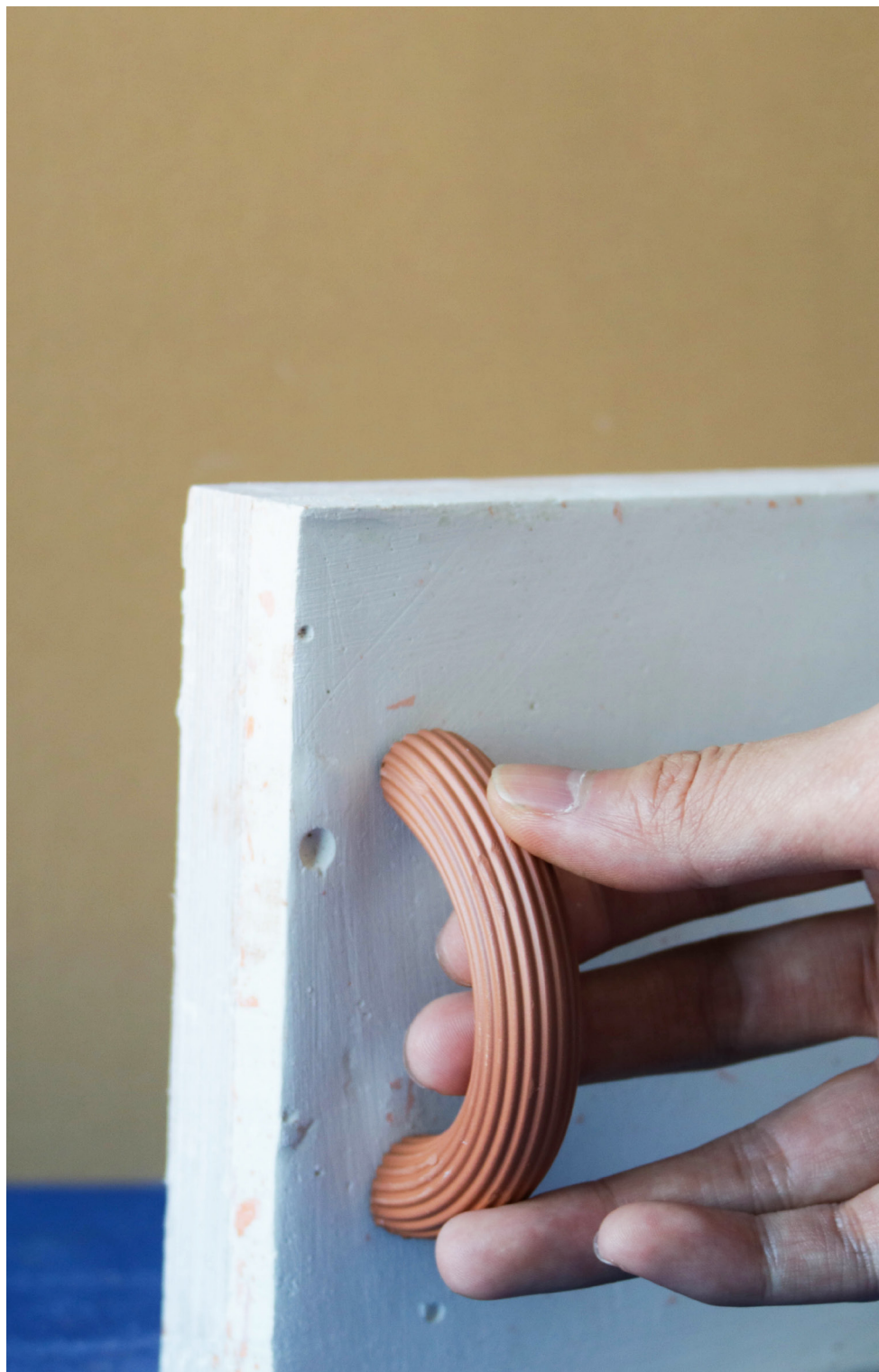








1:1





APPENDIX

EXTRUDING PLAY-DOH

Experimenting with the play-doh included in the original play-sog extruder: the material intended for its use. The material extruded with more ease than the clay because of its softer nature. This also meant the forms that were extruded did not hold or deformed in different ways that were less controlled. As it dried, the material also contorted. It is not as durable or robust as clay.



EXTRUDING PLASTER

I attempted to extrude plaster, using a thicker mix than for usual casting. The outcomes were interesting in that it tried to hold the extruded forms - and in certain parts it is recognisable - but there is very little control over the process and the extruded forms were too sloppy.

