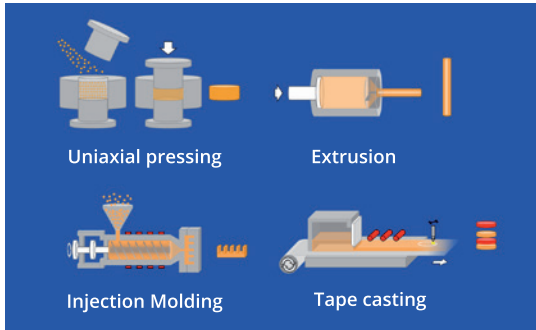


# Ceramic forming processes



CTTC's technology platform regroups on 1000m<sup>2</sup> a set of equipment mainly dedicated to shaping of ceramics from R&D to semi-industrial scale.

It gives solutions to the companies which want to establish rapidly a proof of concept and to obtain prototypes. Suitable technologies are chosen to ensure the up-scaling to industrial production.

## OUR SERVICES

- Development of a manufacturing process from powders to parts
- Shaping of new materials
- Tools conception and testing
- Prototypes and pre-series fabrication
- R&D
- Up-scaling
- Industrial cost prediction (CAPEX and OPEX)

## OUR MEANS

- Uniaxial Press (23 T)
- Cold Isostatic Press (2000 bars – 80 L)
- Piston extruder
- Screw extruder
- Low pressure injection molding (3 L - 5 bars)
- Low pressure injection molding (40 L - 5 bars)
- Tape casting (L 800 x l 500 mm)
- Electrophoretic deposition apparatus
- Coating apparatus
- Screen printing
- Multilayer assembly by hot-pressing

## SOME EXAMPLES

- Process development for ultra high temperature refractory ceramic fabrication (nuclear industry)
- Porous material manufacturing (for filtration of gas or liquid) with planar or tubular geometry
- Conception and set up of a production line for ceramic catalyst media
- Pre-series production of biomedical parts

1. Cold Isostatic Press
2. Extruders
3. Ceramic tubes made by CIP
4. Ceramic foams (replica technique)

