

Materials and Process Engineering

Installations and Equipment for Procedures and Processes

Pre-treatment

- Plasma pre-treatment chambers
- Sandblasting systems

Blends / Homogenization

- Extruder (single-/ twin-screw; g up to kg)
- Kneader
- Rolling mill
- Injection molding machine
- Mixers and dispersers
- Ultrasonic horn
- Material plotter
- 3D plotter (FDM, SLA, 3DP)

Chemical Reactors

- Stirred reactors up to 50 l (integrated rectification)
- Reactors for heterogeneous catalysis (sorption, fixed-bed, structured)

Heat Treatment

- Heat presses: heat- and vacuum presses up to 250 kN (temperature range: RT to 300 °C)
- Cabinet desiccator and circulating air ovens (temperature range: RT to 650 °C)
- High-temperature kilns with controllable gas atmosphere (temperature range: RT to 1800 °C)

Reprocessing

- Cold crushing plant, ball mills, impact mills, pin mills
- Sorption systems: adsorption-desorption systems (PSA, TSA) up to 80 bar, filling level up to 2m
- Membrane separators: pervaporation and ultrafiltration, membrane areas up to 3.5 m²
- Rectification and evaporation systems: laboratory and pilot installations up to 250 l
- Spray dryer, fluid bed dryer
- High pressure homogenizer
- Press filter up to 6 bar, centrifuge up to 11'000 rpm

Coatings

- R2R coating systems
- Hot-melt coating systems
- Chill-roll system for extruder
- Spin-coater: up to 8000 rpm
- Spray stand (wet and powder)
- Dip coating: dipcoater (range: 0.2 to 170 mm/min)
- Foulard
- Wiper coating (automat. wiper table)
- UV belt dryer
- Electroplating

Conditioning

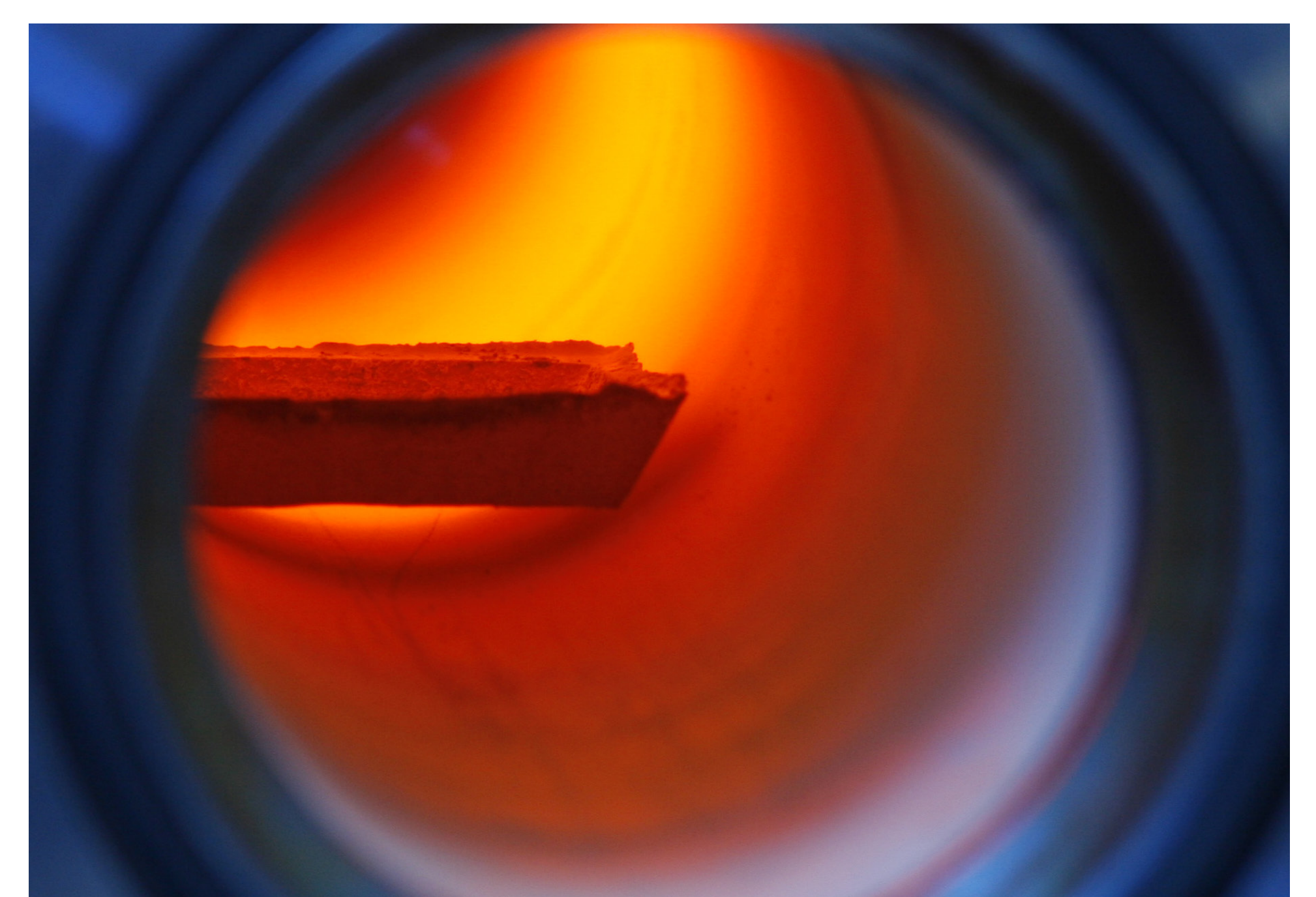
- Climatic test cabinet, 0.33 m³, temperature range: -42 °C to 180 °C, humidity range: 10 to 98% RH
- UV chamber (SUNTEST)



Twin-screw extruder



Plant for rectification



View inside a tube furnace

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