Polymer Recycling Configurations

Depolymerization

1. Extruder | Air Lock System
2. Contact Heat Reaction & Evaporation
3. Vacuum Evacuation
4. Viscous: Twin-Screw & Gear Pump
   Solid: Weir System & Surge Drum

Solvent-based Physical Recycling

Devolatilization of Polymer:

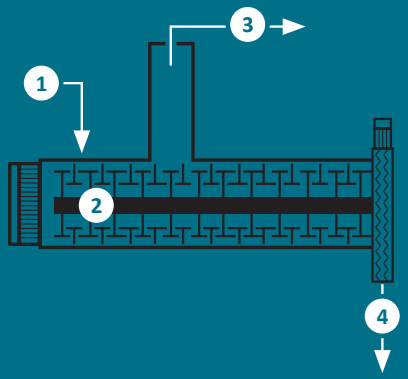
1. Distributed Flash Feed
2. Mechanical Dissipation Evaporation
3. Vacuum Evacuation
4. Twin-Screw & Gear Pump

Solvent Recovery from Waste Streams (e.g. Filtration Residue):

1. (Optional) Flash Feed
2. Contact Heat Evaporation
3. (Vacuum) Evacuation
4. Viscous: Twin-Screw & Gear Pump
   Solid: Weir System & Surge Drum

Low Temperature Pyrolysis

1. Extruder | Air Lock System
2. Contact Heat Low Temperature Pyrolysis
3. (Vacuum) Evacuation
4. Viscous: Twin-Screw & Gear Pump
   Solid: Weir System & Surge Drum



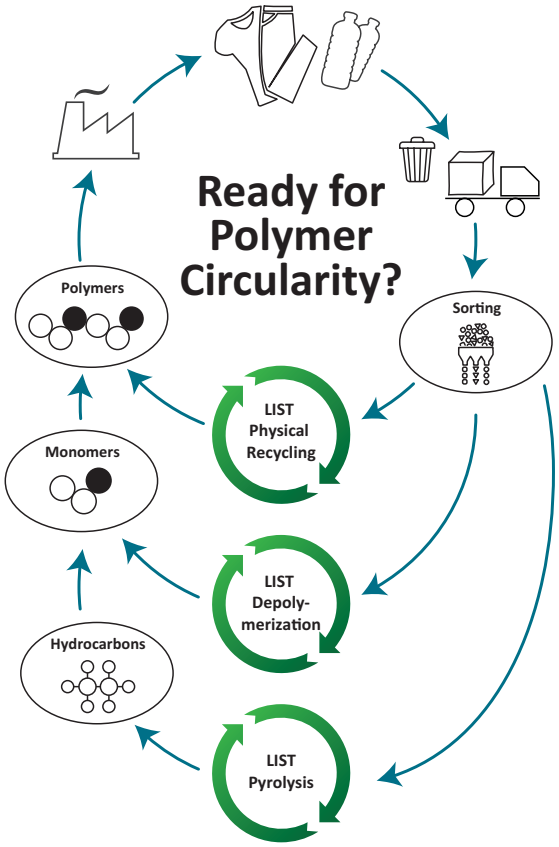
Unique Versatile Processing Technology Platform

- All-Phase Processors
- Kneading, Mixing, Drying all-in-one
- Liquid-, Solid-, Gas-Phase all in one
- Continuous Processing
- Worldscale Capacities
- >55 Years Industrial Experience
- Multi-Bay Testcenter for Piloting

Details on our product-website
www.list-polymer-recycling.com

05/2024

LIST
Kneading - Mixing - Drying

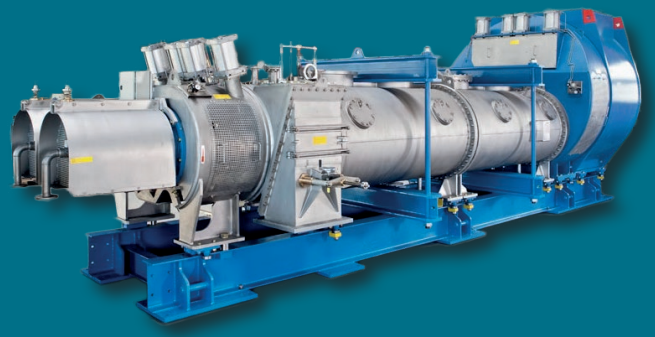


LIST Technology AG

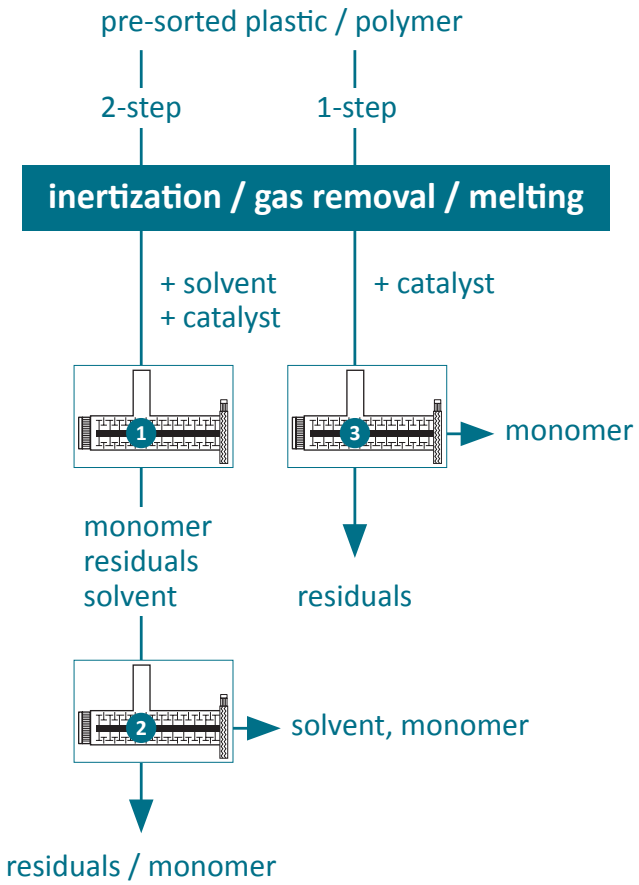
Berstelstrasse 23
4422 Arisdorf
Switzerland
+41 (0)61 815 30 00
info@list.ch

Member of
JAKOB MÜLLER HOLDING AG

www.list-technology.com



Depolymerization

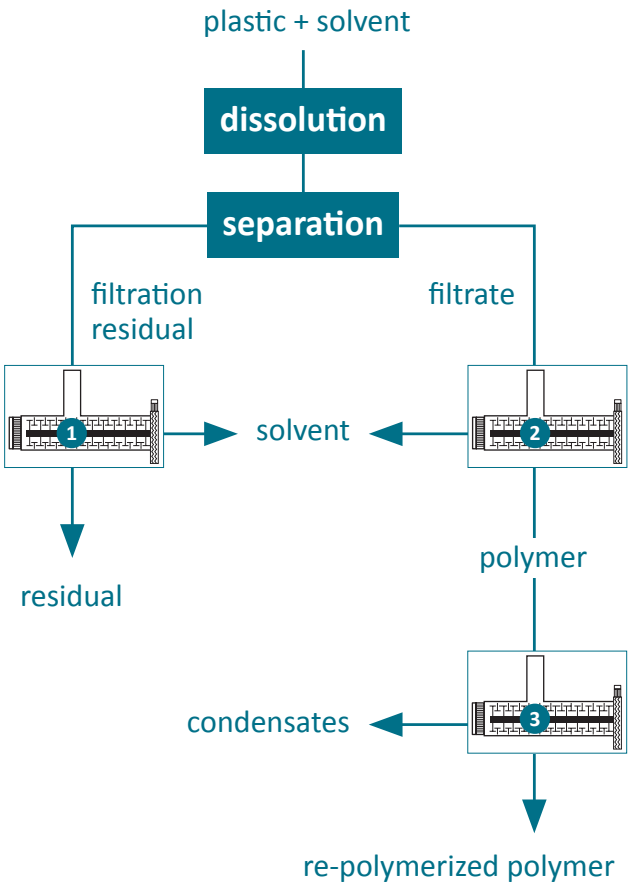


1 Depolymerization of polymer to monomer
→ all-phase feed, all-phase conti-operation, all-phase discharge
→ all-phase mixing, no fouling

2 Solvent and monomer recovery
→ efficient large surface contact heat evaporation
→ safe handling of viscous / solid residuals

3 Depolymerization of polymer to monomer
→ evaporation & evacuation of monomer over full length
→ high recovery rates

Solvent-based Physical Recycling

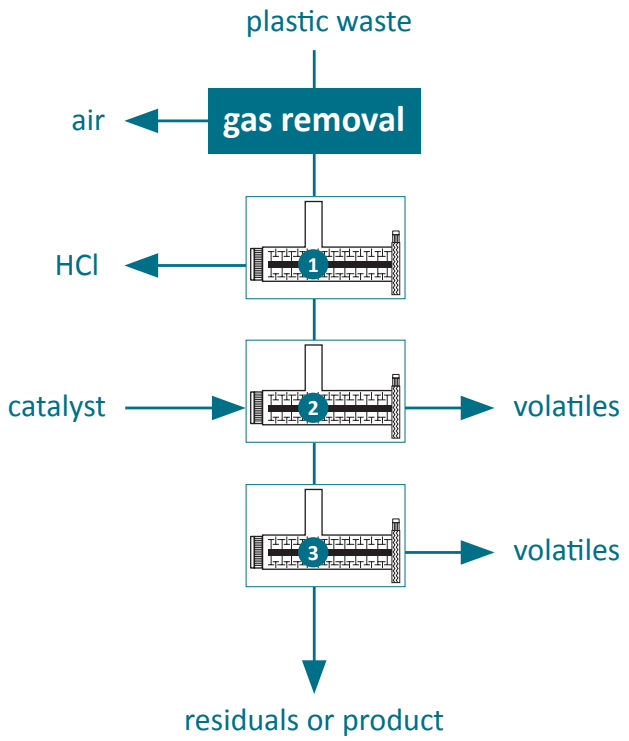


1 Recovery of solvent
→ high recovery efficiency
→ handable, disposable residual

2 Devolatilation of polymer
→ low residual solvent concentration
→ no polymer degradation

3 Repolymerization of defects (optional)
→ product quality improvement
→ high IV

Pyrolysis



1 Compactation
→ increase of density
→ optional removal of chlorine

2 Low temp. pyrolysis
→ efficient energy input
→ high yield

3 Recovery
→ sticky melts, slurries, crust forming products
→ thermal separation of remaining volatile