



UNIVERSITY OF LISBON  
INTERDISCIPLINARY STUDIES  
ON SUSTAINABLE ENVIRONMENT AND SEAS

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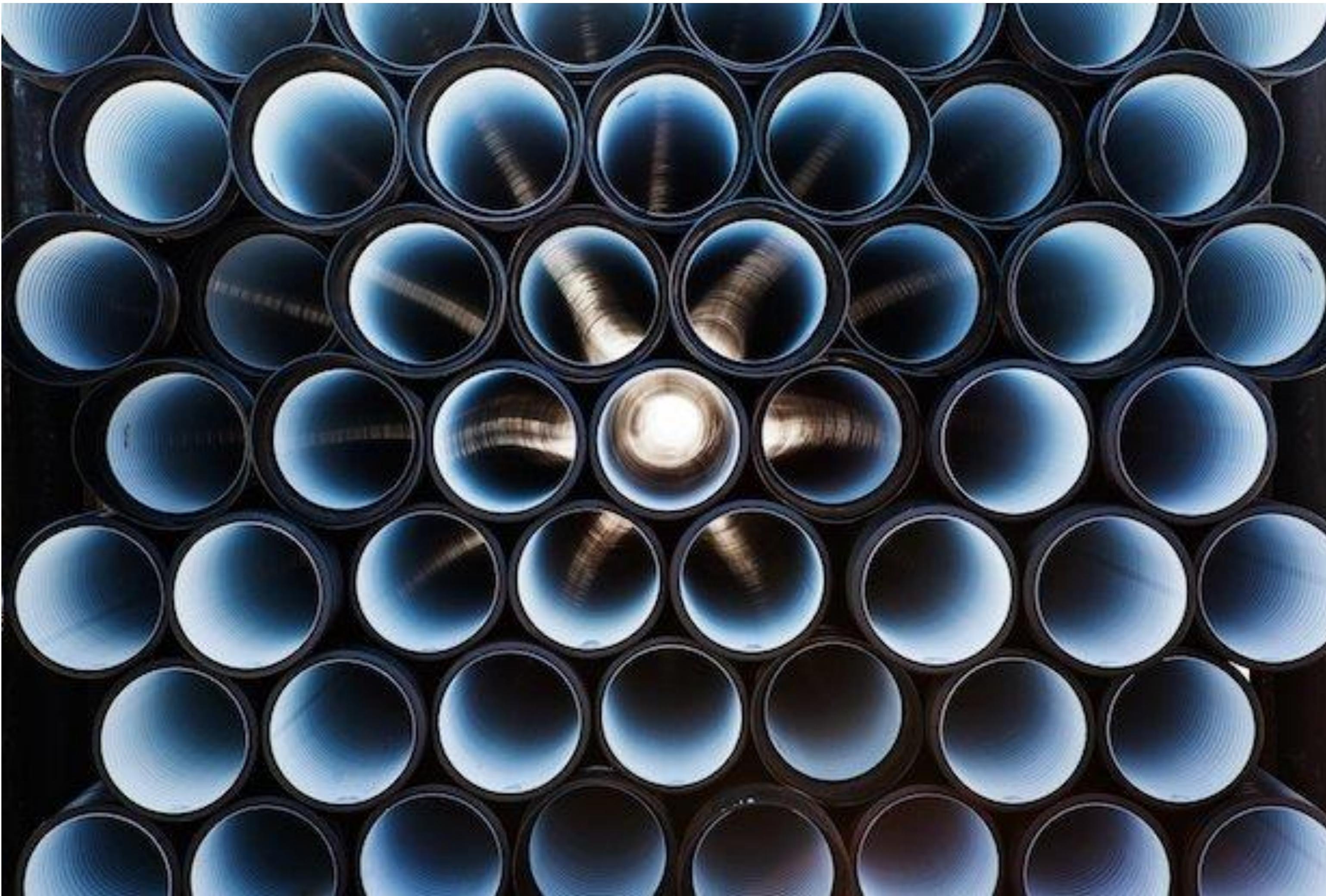
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Extrusion is a process of manufacturing long products with constant cross-section, such as tubing, pipes, hose, rods, structural complex shapes, sheet and film, continuous filaments, and coated electrical wire and cable.

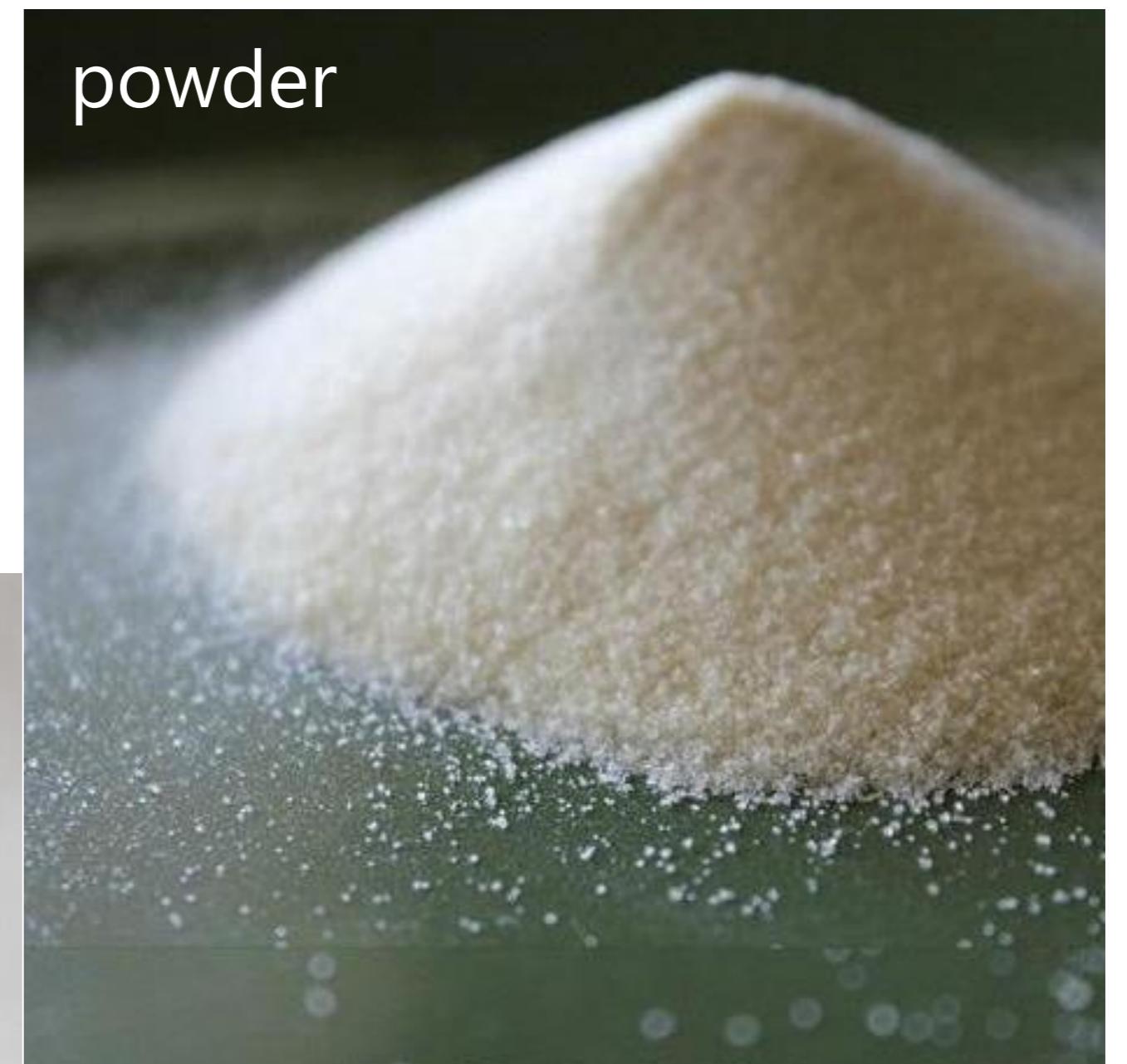
Widely used for thermoplastics and elastomers (but rarely for thermosets).



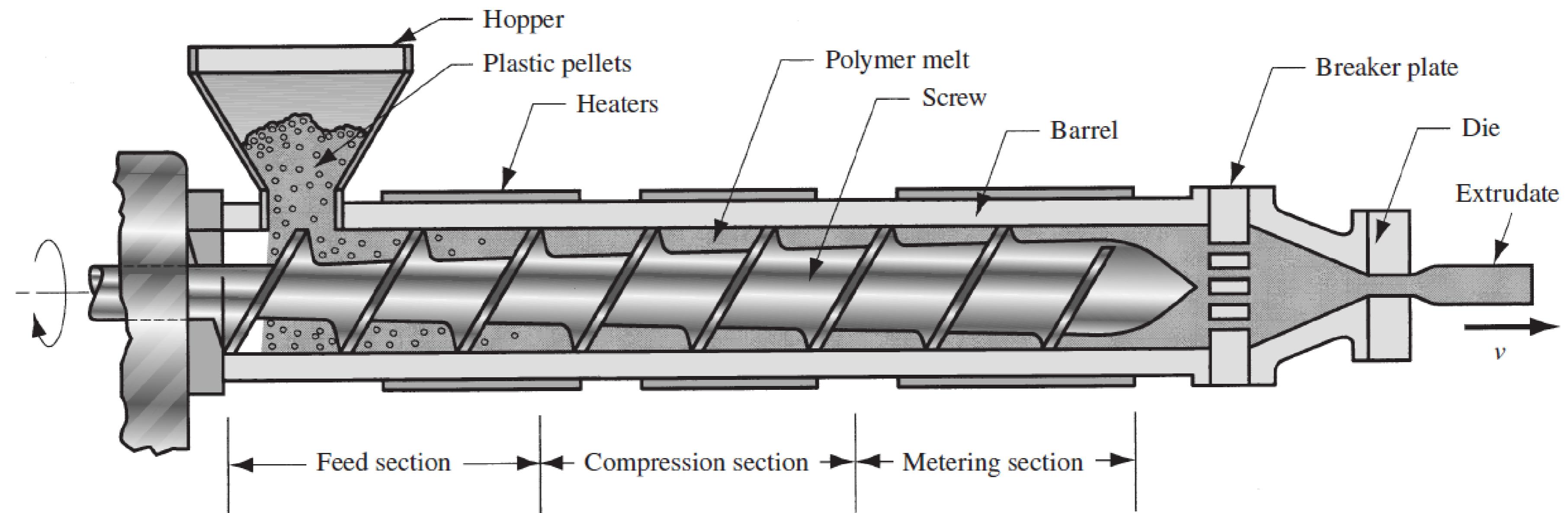
1. Feeding
2. Melting
3. Shaping
4. Cooling



pellets

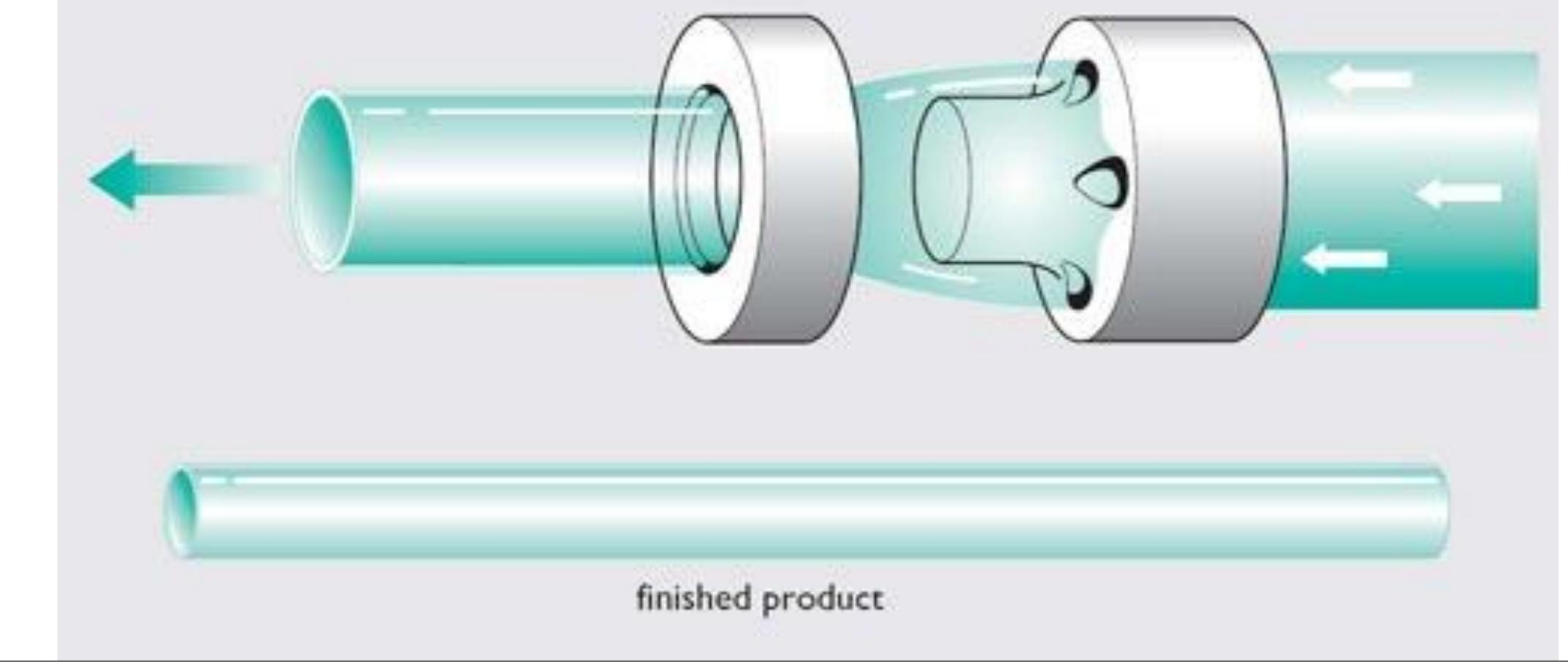


1. Feeding
- 2. Melting**
3. Shaping
4. Cooling



## Extrusion Process

1. Feeding
2. Melting
- 3. Shaping**
4. Cooling

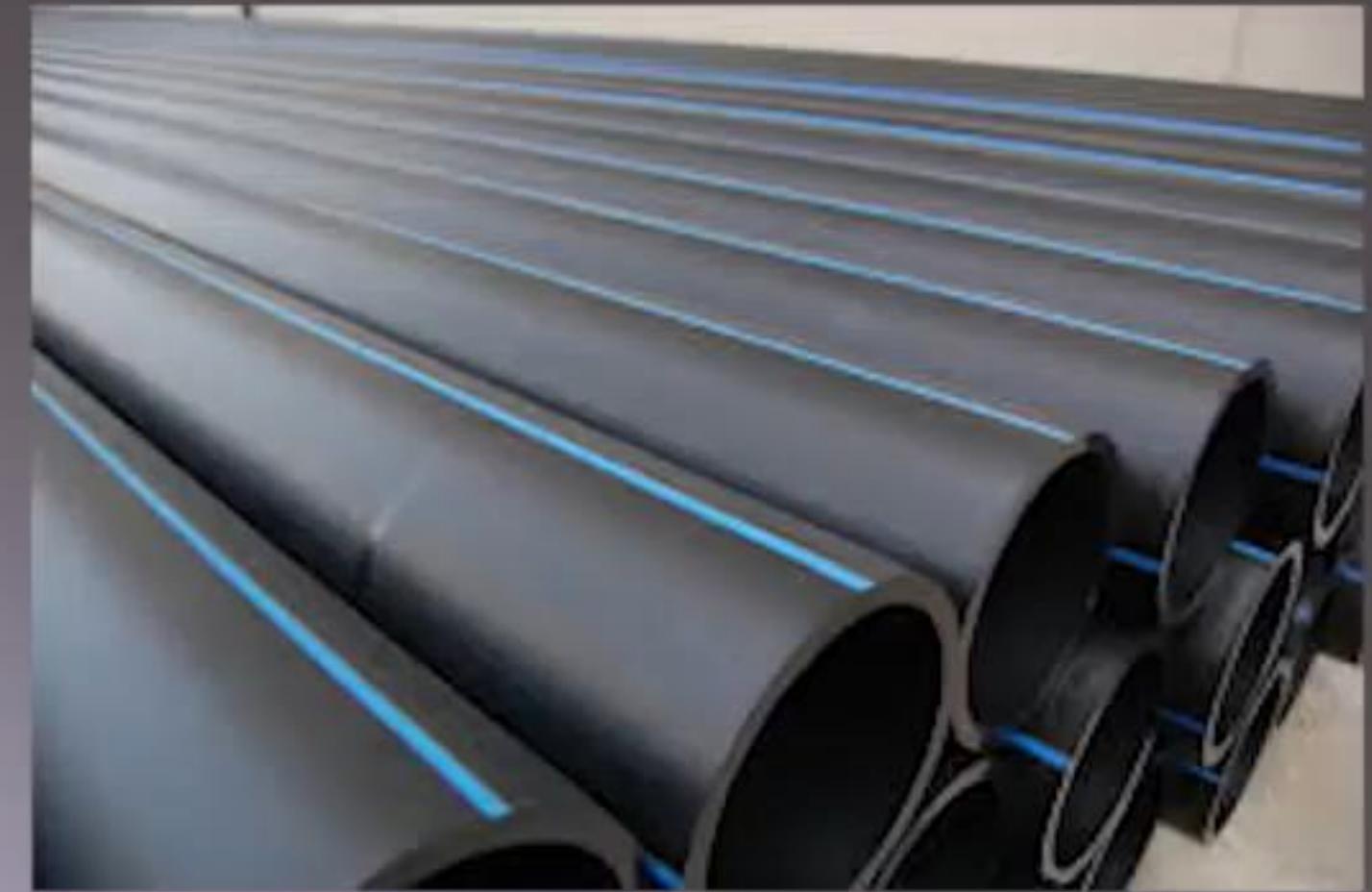


1. Feeding
2. Melting
3. Shaping
- 4. Cooling**



# The **Extrusion** process

For **CONTINUOUS** production of product



## Advantages

- **Low cost (tool and part)**
- **Flexibility**
- **Uniform cross-section**
- **Continuous process**
- **No length limit**
- **High productivity**

## Disadvantages

- **Dimension deviation due to expansion**
- **Limited type of products**

The background of the image is an underwater scene. A large green sea turtle is swimming in the foreground, looking towards the camera. In the water above it, there is a significant amount of plastic waste, including a large plastic bag and several plastic bottles of various colors (blue, green, yellow). The water is a deep blue, and the surface is visible in the background where sunlight is filtering down. The overall theme of the image is the impact of plastic pollution on marine life.

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