

What is pipe extrusion?



Pipe extrusion is a manufacturing process in which molten plastic is pressed through a nozzle to form a continuous pipe. The nozzle is shaped to the desired cross-section of the pipe, and the molten plastic is cooled and solidified as it passes through the nozzle. Pipe extrusion can be used to produce a wide range of pipe sizes and shapes, from small irrigation pipes to large sewer pipes.

The process of pipe extrusion usually involves the following steps:

1. **Preparation:** The plastic raw material is prepared by feeding it into a tank and melting it in an extruder. An extruder is a long, heated chamber with a screw that rotates to mix and melt plastic.
2. **Extrusion:** The molten plastic is pressed through the nozzle with a screw in the extruder. The nozzle is shaped to the desired cross-section of the pipe.
3. **Cooling and solidification:** The molten plastic is cooled and solidified as it passes through the nozzle. This is usually done by passing the pipe through a cooling tank or by spraying it with water or air.



4. Drawing and cutting: The pipe is then pulled through the pulling unit and cut to the desired length.

Pipe extrusion is a versatile manufacturing process that can be used to manufacture a wide range of pipe products. Some common applications of pipe extrusion include:

- Water and sewer pipes
- Electrical and telecommunications cables
- Irrigation pipes
- Drainage pipes
- Gas pipes
- Mining and industrial pipes
- Medical & Pharmaceutical Cables
- Food and beverage packaging

Pipe extrusion is an economical and efficient way to produce high-quality pipe products. It is a widely used production process in various industries.

What are vacuum and refrigeration tanks in pipe extrusion lines?

Vacuum and refrigeration tanks are essential components of pipe extrusion lines. They play a key role in ensuring the production of high-quality pipes.

Vacuum tanks are used to calibrate the shape and dimensions of the pipe after exiting the nozzle. They also help remove any air bubbles or voids that may have formed in the plastic during the extrusion process. The vacuum tank is usually filled with water and the pipe is submerged as it passes through it. The vacuum created inside the tank helps to shrink the pipe and ensure its uniform shape and diameter.

Cooling tanks are used for cooling the pipe after its calibration in the vacuum tank. The cooling process is important because it prevents the pipe from deforming or shrinking during cooling. The cooling tank is usually filled with water and the pipe is submerged as you pass



through it. Water absorbs heat from the pipe, helping it to cool quickly and evenly.

Vacuum and refrigeration tanks are usually made of stainless steel to prevent corrosion. They are available in different sizes and configurations to meet the needs of different pipe extrusion lines.

Here are some of the benefits of using vacuum and refrigeration vessels in pipe extrusion lines:

- Improved pipe quality: Vacuum and refrigeration tanks help to produce high-quality pipes with fixed dimensions and a smooth surface.
- Increased production efficiency: Vacuum and refrigeration vessels can help increase the production efficiency of pipe extrusion lines by reducing the time needed for cooling and calibration of pipes.

