

Tips for defect-free extrusion of TPU

在擠出成型中的異常處理

擠出成型工藝可製作塑料管材、板材、帶材、異型材、棒材、薄膜等。TPU的擠出成型是其中代表。

在擠出加工前需注意以下幾點：

- 1.TPU易吸濕，加工前必須充分乾燥。
- 2.根據材料硬度、粘度來設定加工溫度。
- 3.根據材料特性考慮螺桿結構和長徑比。

The extrusion process can be used to produce plastic pipes, plates, strips, profiles, bars, films, etc. TPU is widely used in extrusion products.

Pay attention to the following points prior to extrusion processing:

- 1.TPU is easy to absorb moisture when exposed to atmospheric humidity and must be fully dried Prior to the processing.
- 2.Set the processing temperature according to the hardness and viscosity of the material.
- 3.Choose the screw structure and length to diameter ratio according to the material characteristics.

不良現象	解決方法	Defect	Remedies
皺紋	<ol style="list-style-type: none"> 1.提高模頭溫度與加工溫度 2.降低冷卻水溫 3.排除模頭有損傷或雜質 	Wrinkling	<ol style="list-style-type: none"> 1.Increase die temperature and processing temperature 2.Reduce cooling water temperature 3.Check damage or impurities in the die
接合線	<ol style="list-style-type: none"> 1.提高加工溫度 2.提高模頭內膜壓力 3.調整機頭位置與溫度 4.材料充分乾燥 	weld lines	<ol style="list-style-type: none"> 1.Increase processing temperature 2.Increase inner pressure of die head 3.Readjust machine head position and temperature 4.Fully dry material
透明性差	<ol style="list-style-type: none"> 1.提高模頭溫度 2.降低螺桿速度或水槽溫度 3.選擇透明級材料 4.材料含水量高 5.滑劑添加過量 	Poor transparency	<ol style="list-style-type: none"> 1.Increase die temperature 2.Reduce screw speed or cooling water temperature 3.Choose transparent material 4.TPU is too moist, fully dry TPU first 5.Reduce additive amount

Tips for defect-free extrusion of TPU 在擠出成型中的異常處理

不良現象	解決方法	Defect	Remedies
尺寸不穩定	<ol style="list-style-type: none"> 1.材料有雜質 2.溫度太高或入料不順 3.牽引太快 4.模頭有損傷 5.材料含水分 	Dimensional variations	<ol style="list-style-type: none"> 1.Material pollution 2.Reduce the temperature of feed zone 3.Slow the traction 4.Die head is damaged 5.Check dryer and conveyor system
氣泡	<ol style="list-style-type: none"> 1.材料充分乾燥 2.芯線夾入空氣 3.吃料不順暢 4.提高成型溫度 	Blisters	<ol style="list-style-type: none"> 1.Check dryer and conveyor system 2.Check air feeding with material 3.Material feed in insufficiently 4.Increase extrusion temperature
表面偏亮	<ol style="list-style-type: none"> 1.生產溫度太高 2.提高水槽溫度 3.生產速度太慢 4.降低眼模溫度 	Hose too glossy	<ol style="list-style-type: none"> 1.Reduce extrusion temperature 2.Increase cooling water temperature 3.Increase speed of extruder 4.Reduce mold temperature
有滯留物	<ol style="list-style-type: none"> 1.加高模頭溫度 2.降低TPU粘度 3.其他物質污染 4.材料焦化 	Tear in hose wall	<ol style="list-style-type: none"> 1.Increase die temperature 2.Reduce material viscosity 3.Another material pollution 4.Material is coking
黑點	<ol style="list-style-type: none"> 1.模頭殘料滯留 2.清洗螺桿 3.更換過濾網 4.生產溫度太高造成材料焦化 5.材料受污染 	Specks and spots on extrudate	<ol style="list-style-type: none"> 1.Check and clean die 2.Check and clean screw 3.Change the filter screen 4.Reduce extrusion temperature 5.Keep all material containers tightly sealed to prevent material pollution
不熔顆粒	<ol style="list-style-type: none"> 1.降低加工速度 2.提高加工溫度 3.排除材料污染 4.清理模頭與螺桿 5.增加過濾網目數 	Gel matter in extrudate	<ol style="list-style-type: none"> 1.Reduce extruder speed 2.Adjust processing temperatures 3.Check foreign material in processing material 4.Clean the die and screw 5.Use the higher mesh number of screen