

tech.topic

Excessive Die Drool

Die drool occurs when, during extrusion, excess extrudate slowly builds up at the die exit and eventually attaches itself to the insulation. The resultant oversized buildup must be cut out. If the die drool is not removed at the start or finish of a useable length, scrap results.

When the problem of die drool occurs, check the following:

1. Are the temperature controllers on the extruder, head and die performing properly?
2. Has there been a change of material or process parameters?
3. Has there been a change in the die tooling?

Possible causes of die drool and recommended solutions:

- A. The head or die temperature is too high (compound too hot).
 1. Check for proper controller operation and/or reduce temperature.
- B. The die tip may be too cool.
 2. Carefully add a flame to the die tip and see if this corrects the problem.

- C. The problem may be the die land.
 1. Change the size of the opening and shorten the length of the land.
- D. The problem may be in the screw design.
 1. If the metering section of the screw is too deep there may be pressure variation between the die and screw flight. There may be pressure surging from buildup in the compression section of the screw which may result in die drool.

Note: If the die drool builds up at a slow pace, the cause is probably related to problems in the die or in the resin. If the drool tends to appear suddenly and at regular intervals, the problem may be due to a buildup on the screw.

- E. A less common cause of die drool is contaminated compound.
 1. If contamination is found, determine if it is in the material as received or the result of an in-house problem.

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