Extrusion Troubleshooting Guide

PVC extrusion is a continuous processing method that offers high speed and high volume production with the ability to create products of varying shapes, thickness, hardness, additives and colors.

Due to the complexity of the extrusion processing method, problems can and will eventually occur. Because the majority of the extrusion processing steps occur within the machine and are not visible, it is essential to use a systematic approach and to keep detailed job logs to minimize costly down-time.

Preventative Measures

- Operators should fully understand the extrusion process
- Good machinery instrumentation and maintenance records kept
- Current and historical processing data available
- Material should be stored in a clean, dry area, without being subject to extreme temperature variation.

3 Main Categories of Common Extrusion Problems

- Aesthetic flaws (e.g., pits, black specs, pinholes, drag marks, die lines, sink marks)
- Size variance (which can be intermittent or contiguous)
- Dimensional variations

Troubleshooting Common Problems

The reverse side of this page illustrates common problems and their causes and remedies. This resource can assist your team in diagnosing and correcting processing issues and ensuring a quality product.

Because of variances in equipment, methods and conditions, this resource is only a general overview of common defects.

Additional information can be obtained by consulting your individual product tech data sheet or by contacting John Schlitzer, Director of Product Development at 800.462.4781 ext. 104 or john.schlitzer@sylvin.com.
<table>
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<tr>
<th>Problem</th>
<th>Image Description</th>
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<th>Solution</th>
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| 1. Lumpy Surface     |                   | Too cold               | • Increase all temperatures  
• Increase screen packs                                                    |
| 2. Surging           |                   | Equipment or Settings  | • Take off puller irregular  
• Motor speed varies  
• Inconsistent Rpm’s  
• Uneven feed  
• Bridging in hopper  
• If Ammeter is varying by 5% or more, increase temperature of the feed |
| 3. Orange Peel Surface |                  | Overheating            | • Raise die temperature  
• Decrease speed                                                           |
| 4. Pimples on Surface |                  | Resin Gels             | • Increase screens  
• Decrease speed                                                           |
| 6. Excessive Shrinkage |                 | Too much stress        | • Cool slower  
• Decrease speed  
• Design die with lower draw down                                          |
| 6. Bubbles           |                   | Moisture               | • Dry Material at 220F for one hour                                       |