

MD Flow Lines

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Defects in extruded products, which appear consistently in the exact same axial location, are seldom directly related to the extrusion screw design. The melt quality from the screw is random in relation to its instantaneous output. This is particularly true when a breaker plate/ screen pack is used which usually eliminates any "screw pattern". Often, the screw design is indirectly related in that it causes a viscosity change that affects the flow pattern downstream of the screw. These viscosity changes can greatly alter flow through adapters, dies, melt pipes, etc., and cause flow lines in the extrudate. These changes often appear after a screw change and, hence, are attributed to the screw directly. However, they are a combination problem that is more attributable to the downstream equipment design being insensitive to viscosity changes. Correction requires analysis of the flow velocity profiles throughout the system.

- Jim Frankland

See also:

- [Designing high performance screws](#)
- [Extensional viscosity and melt strength and their role in film blowing](#)
- [PVC gels](#)

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