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Meniscus stability in the planar-flow melt spinning of thin metallic sheets ANTHONY ALTIERI, PAUL STEEN, Cornell University — Planar-flow melt spinning is a process for the continuous fabrication of thin, metallic sheets or ribbons. During solidification, molten metal-air meniscus vibrations create periodic thickness variations on the final product. It has been observed that flow configuration and contact line conditions affect the frequency of thickness variations. A model problem of a free interface enclosing an inviscid fluid in a slot is examined. A linear stability analysis shows the effect of flow near the interface for various contact line constraints.

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