

## Liquid and Gas Jets Impinging on a Moving Wetted Surface

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This paper contains the theoretical development and predicted results for both analytical and computational models of a combined liquid and gas jet wiping system designed to remove cooling liquid from the surface of a continuous moving strip. An analytical approach was used to determine the average cooling liquid height on the moving strip upstream of the jetting assembly. A momentum balance was applied to determine if the combined liquid and gas jet momentum were sufficient to prevent the cooling liquid from traveling downstream with the strip. CFD modelling of the jetting system was successfully developed based on the VOF technique. It was found that when no gas jet was applied a thin film of liquid remained, where the thickness of the film was most strongly influenced by the liquid jet incident angle. When the gas jet was applied the liquid film was removed in all cases.

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