Title	Removal of a viscous film from a rigid plane surface by an impinging liquid jet
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Summary paragraph	Experimental investigation of the removal of thin films of viscous liquid (silicone oil) from flat discs of different material by a turbulent coherent water jet impinging normally on the disc. The mass of the silicone oil was measured and compared with the average layer thickness predicted by their model. Their model used the Watson (1964) model to estimate the local wall shear stress imposed on the oil layer by the water film, and a Reynolds lubrication approach to evaluate the velocity in the viscous liquid. Promising agreement is reported. Effects such as wave formation were not considered.
Novel/notable aspects	Early example of coupled flow in cleaning
Flow key words	Impinging turbulent liquid jet; hydraulic jump; coupled flow (water-viscous soil)
Cleaning type/key words	Hydrophobic liquid soil (silicone oil); shear-induced flow; thinning of layer
Field/background	Chemical engineering
Theory/method/analysis key words	Boundary layer treatment (water flow); lubrication approximation (oil); thin films; coupled flow