

## **Chemical Milling Environmental Improvements**

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Chemical milling has been an important aerospace process since the late '50s. Early operations, however, were not environmentally friendly. Chem-mill maskants emitted solvent, tanklines often used chrome-based desmut solutions, the process required a large amount of rinsewater, and the large amount of dissolved aluminum required frequent etch tank dumps. Environmental impact has significantly improved in recent years. New regulations require solvent capture or low (<150 g/L) VOC maskants. Non-chrome desmut solutions are common. Etch solutions can be regenerated, and there are several techniques available to reduce rinsewater usage. This paper discusses these technologies, describing how Boeing's Auburn chem-mill facility has reduced its emissions. It also includes an environmental overview for the rest of the industry.

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