

446a Solvent and Catalyst Recovery in the Pharmaceutical Manufacturing Industry

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Lean Manufacturing principles are important in pharmaceutical manufacturing as they can lead to significant cost savings and enhanced environmental performance while maintaining product quality. Waste elimination is a key aspect of Lean Manufacturing. In a single chemical batch process, four solvent streams and one catalyst were recovered and re-used in the process. This paper describes the process design, pilot development, and factory implementation of the recovery steps. The waste eliminated includes storage and disposal of used solvents and catalyst as well as reduced solvent deliveries to the site. The resulting cost savings is over \$ 1 million annually and a total solvent reduction in excess of 60,000 gallons per campaign.