Bridging the Gap on Industrial Process Integration Implementation

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Abstract

Retrofit to improve the efficiency of resources (energy, water, power and materials) in process plants can contribute to cost saving and environmental protection for chemical and manufacturing companies. Process Integration (PI) techniques based on Pinch Analysis can enable companies to target and explore the scope and extent of resource efficiency improvement possible for their processes, and achieve the goal of cleaner production. The retrofit measures may range from changes in operating conditions that require no investment cost, to those demanding high investments that are typically backed by higher return on investment. Even though there have been numerous successful accounts of PI applications worldwide, there are still many companies that have yet to explore the feasibility of implementing PI techniques, and as a result, have yet to realize the full potential of PI application in stretching the limits of resource cost-savings. While the lack of awareness of the PI methodology have been effectively addressed by PI experts through short courses and workshops; resistance to change and skepticism of the scope, benefits and practicality of PI implementation remains as among of the key obstacles to PI implementation in many companies. This paper highlights some typical barriers for practical implementation of process integration projects, and possible approaches to address and overcome these barriers.