"eBriefing on Resource Efficiency"

Reed Consulting Bangladesh Ltd.

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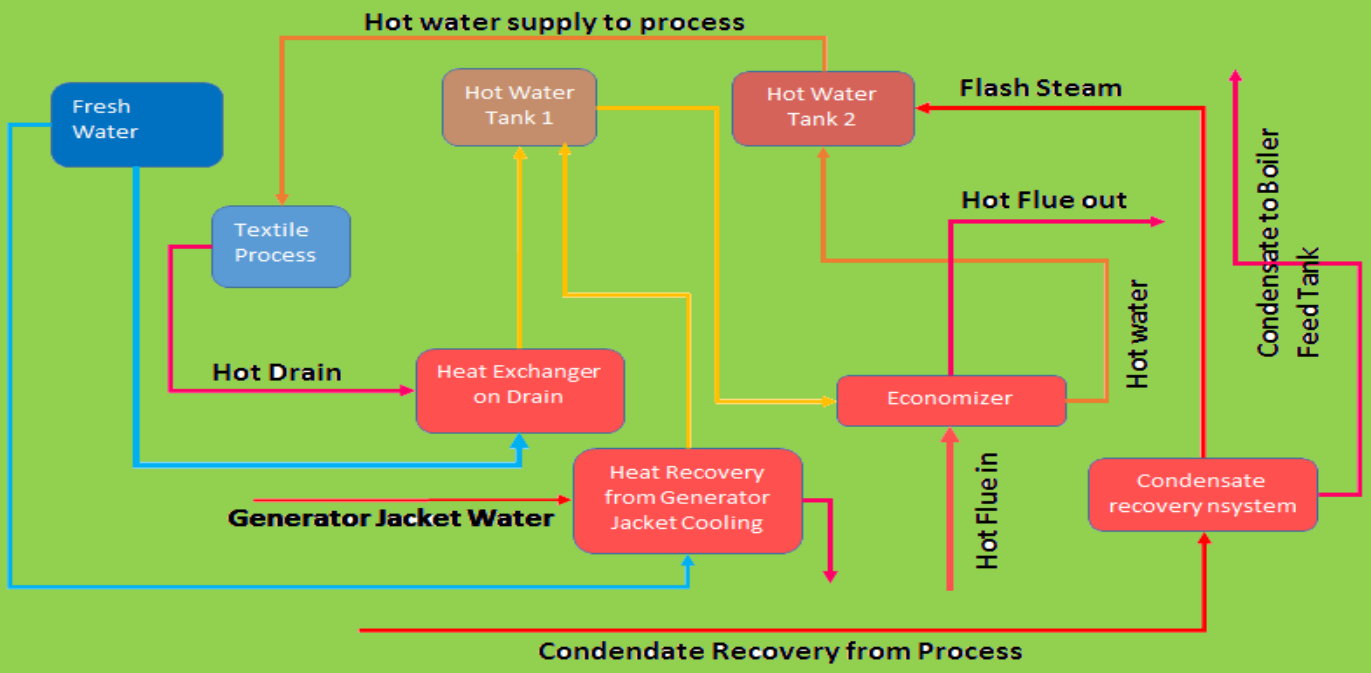
Thermal Energy (Steam) Saving

In textile washing/dyeing/finishing factories, water is used extensively in the dyeing and washing/rinsing processes. In a cotton knit dyeing process, typical dyeing temperature is between 60°C and 90°C. Direct steam is used to heat the water from ambiant temperature (approximately 30°C). After the dyeing steps, this hot water is drained out automatically through opening a machine valve which is pre-set. By recovering the heat from hot water energy consumption can be reduced. Other examples of re-using significant amounts of energy include flash steam recovery from condensate, boiler and generator stack heat recovery; generator jacket cooling water heat recovery.



Hot water modules are devices which are used to recover heat for secondary use in processes systems. Typically in textile industries, heat exchanger, economizer, flash steam vessels are used to collect waste heat from different points. The collected heat is recovered to produce hot process water.

More details about hot water modules will be given in future eBriefings. Thermal energy sasving in other manufacturing secors will also be adressed in upcoming eBriefings.

RCB has carried out assessments for a number of factories in Bangladesh. Most factories are not collecting or reusing this wasted valuable energy. When a well-designed hot water module is implemented in the wet textile factories, the typical fuel saving can be between 15% and 30%.

For further information about engineering consultancy please contact our Principal Textile Engineer Dr. Mohammad Abbas Uddin abbas.uddin@reedconsultingbd.org.

RCB provides consultancy in Energy Efficiency, Production Engineering, Process Improvement, Water and Waste Minimisation.

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