

ULTRAMAX[®] Application Profile

Paper: Energy Savings

Process: Procter & Gamble Tissue paper mill, with through air flow and yankee drying.

Objectives: Reduce energy cost while maintaining quality, for constant speed.

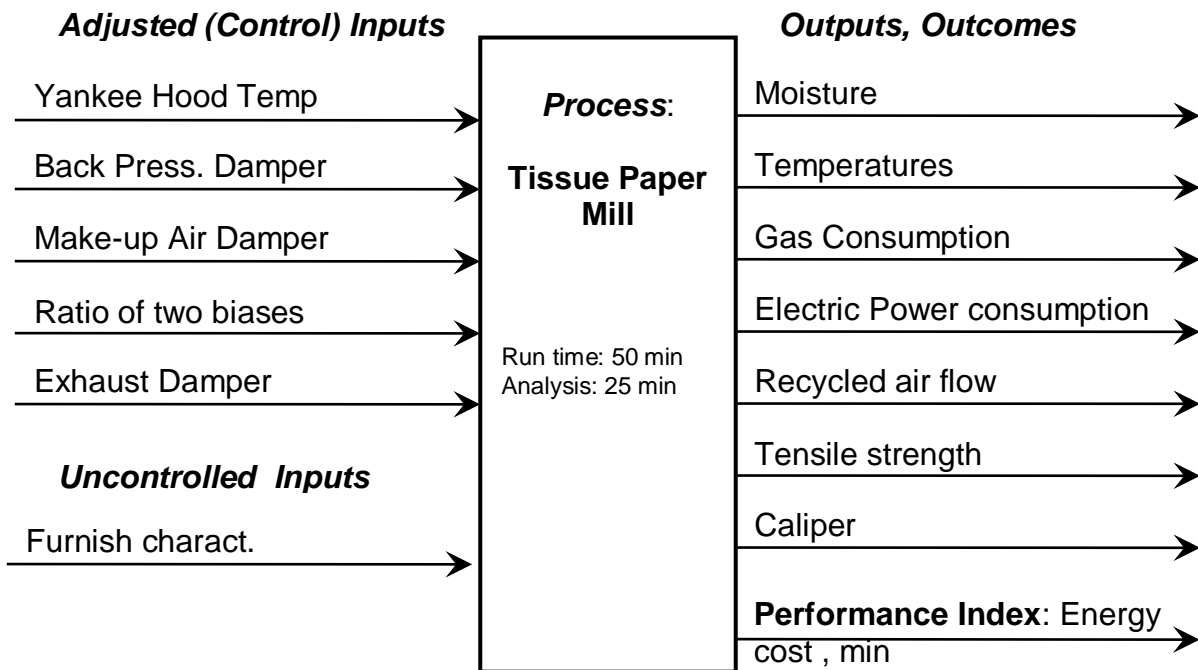
Results Summary: First stage: 7.1% reduction in energy cost. The optimum was at wide-open recycled air flow.

Software sensitivity analysis, confirmed by engineering, resulted in the desirability to increase recycle fan and duct sizes (\$50K). The increase was implemented. The next optimization, not at maximum recycle capacity, saved another 8.5% energy cost.

Existing simulation models were updated to represent more accurately the recycle mechanism and its parameters.

Total savings of 15.6%. The findings were applied to eleven other mills = \$4.2 m/yr.

DECISION INPUT/OUTPUT DIAGRAM



Optimizing the Performance Index implies satisfying constraints (not shown)