MINIMIZATION OF MANUFACTURING COST USING FUZZY CONTROL IN CEMENT PLANT

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The cement plant is manufacturing ordinary Portland cement (opc), Portland Pozzolana cement (ppc) and Portland slag cement (psc). These different cement manufacturing technologies existing in the country are wet process, the semidry process and dry process over the past few years. The industries are concentrated to decrease the manufacturing costs and try to increase productivity cost. The pressure of international competition and the advances of technology can no longer be ignored. International competition is forcing domestic corporations to become more flexible and responsive in the market place, more economical in their operations and more selective in their corporate focus and objectives.

We approach this problem using fuzzy control to provide a balance between manufacturing cost and productivity cost. Let us examine how we minimize the manufacturing costs, the manufacturing cost is dependent on increasing labor and energy costs, increasing imports and failing prices and well positioned in the market place. We approach the problem using fuzzy theory as most of the
notions involved are very uncertain and vary with time, place and person.

To solve these problem we need to

1. Reduce manpower costs
2. Reduce energy costs
3. Increase capacity
4. Improve product quality

For these industries, we have collected information from Executive Information Systems, which is the best information available as they are the experts in this specialized field. Using this data, we adopt fuzzy control to minimize the manufacturing cost.