PERDEC: The Best Equipment Replacement Decisions

PRODUCT PROFILE

Purpose of Software:

➢ To predict the optimum time at which **machinery and equipment** should be replaced
➢ To balance the decreasing cost of ownership with the increasing operations and maintenance cost
➢ To find the lowest point on the total cost of ownership curve
➢ Decision support tool for Repair or Replace
➢ Applies statistical analysis to fixed equipment for the purposes of optimizing maintenance and replacement costs – production equipment, processing equipment, motors etc

Benefits:

➢ Improved decision making, reduced cost
➢ Shows the Equivalent Annual Cost (EAC) curve (based on purchase price, operations and maintenance costs)
➢ Prompts the replacement decision at the lowest EAC
➢ Determines the right Repair or Replace decision
➢ Monitors individual equipments to identify the optimum replacement or disposal time
➢ Predicts the cost curve based on past data (where historic data exists)
➢ Tracks the cost curve based on current data (where no historic data exists)
➢ Easy to use data entry screens requires little training
➢ Easy to read graphical output shows results at a glance
➢ Simple graph export routine to show results in PowerPoint, Excel etc
➢ Shows the cost impact of varying annual hours usage per equipment
➢ Provides "what if" model for variances in taxes, inflation and discount rate

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Basic Input Data:

- Acquisition and replacement cost
- Utilization profile (steady profile of usage per year, variable, intermittent)
- Inflation rate for the period
- Discount rate for the present value of future cash flows
- Tax rates
- Operations and maintenance costs
- Major repair costs
- Resale Value

Outputs:

- Equivalent Annual Cost (predicted annual cost of owning and operating the equipment)
- Best year for replacement
- Exportable Graphs of the cost curve
- "What if" analyses based on changes in assumptions
- Decision on repair or replace based on EAC

Target Industries:

- Any industry where fixed equipment is a significant part of their operations
- Any heavy industry such as mines, steel, metals processing, chemicals, oil and gas, petrochemical, pulp and paper
- Discrete manufacturing facilities – automotive, electrical, components, furniture, tires
- Process manufacturing – pharmaceuticals, food and beverages
- Municipal, state and federal departments, military, customs, airports
- Telecom, gas, electrical, water distribution companies
- Success stories in power generation, cement, chemicals and others