Cost Modeling Homework

Due Tuesday November 14, 2005

For each of following, explain the calculations within the Injection Molding model (supplied spreadsheet). You should describe the relationship and the parameters used in each cell, when possible tracing all calculations back to the input cells in Column C or on the Data sheet. Also, provide a short 1-2 sentences description of what you think the intent of the formula.

Use the following as an example:
Predicted Clamping Force (J62)
> *Predicted Clamping Force =*
>> *(Projected Area of the Part being Modeled) **
>> *(Number of parts made simultaneously) **
>> *(224 / √Avg Part Wall Thickness + 174)/100*

This relationship is the result of a statistical analysis of a number of actual parts and their production conditions. The 224 and 174 are parameters which emerged from this analysis as providing the best fit.

Unit Materials Cost (J6)
explain this simple formula as well as all those leading into it back through the inputs

Effective Production Volume (J33)

Available Operating Time (J36)

Cooling Time (J56)

Cycle Time (J57)

Effective Capacity (J34)

Required Operating Time (capacity) (J40)

Number of Parallel Streams (J43)

Main Machine Investment (M12)

Annual Main Machine Cost (K12)

Actual Paid Operating Time (J46)