

Re: two factories, different profile, how to compare?

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- *From:* bm459@xxxxxxxx
 - *Date:* 21 Sep 2006 07:51:21 -0700
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peter.anderson.1969@xxxxxxxxxx wrote:

fellow experts,

lets say I have 2 factories. One in China, the other in Taiwan. Both are identical, containing the same machines, same brand, manufacture the same item. All factors are same except their age are different. This is because the factory in china started operation in 2005 while that in Taiwan started way in 1995.

As you know machines do breakdown, lets assume that there are 10 machines in each factories.

China – 10 machines, all are 1 years old
Taiwan – 10 machines, all are 10 years old

So now I want to compare the 2006 performance of both factories in terms of their breakdown trends. plotting their cumulative failure function, i found out that the curve belonging to Taiwan is much steeper than China. Meaning the rate of failure is much higher in Taiwan.

My engineers in Taiwan protest saying that the machines in taiwan are much older, therefore my way of comparing is not fair.

What in you opinion should I compare, such that everyone is satisfied that it is a fair comparison?

Many thanks!

Regards,
Peter

Is the analysis meant to accomplish any purpose other then to put on a dog and pony show? If all it is for it is simply propaganda for those

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stupid enough to be impressed by lots of meaningless charts and tables your objective should be to generate the data with the smallest effort so you can do something useful with your time that will actually help the company.

On the other hand if the data is going to be used for something the obvious thing to look at is what types of breakdowns are happening in both plants. You need to be specific down to what part failed and how it failed. Then ask what can be done to reduce the rate of failure. Can you grease a bearing more or less often and cut failure rate? Can you simply replace some part on a set timetable and reduce failure rate? Is there some kind of operator training that would reduce peak stress on the equipment thus reducing failure rate? Is there a replacement part available for high failure rate parts that is less prone to fail? Are the failures due to wear or corrosion or heat? And on and on.

With a proper maintenance program and proper operator training there really is generally no reason for ten year old equipment to break down any more often than one year old equipment of identical design. In fact the older equipment might even be less prone to breakdowns due to much better operator experience unless a major cause of failure is corrosion. If that is the case why did you not build the new plant with more corrosion resistant materials to avoid future problems? Or maybe you did and that is why it is performing better?

You could also consider the cost to prevent downtime vs the cost of living with downtime? Sometimes accepting unscheduled downtime is not all that costly. It all depends on the type of operation.

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