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# BOILER ROOM

## Everybody's got an excuse

The top five reasons why companies don't measure reliability

Most companies don't measure mean time between failures (MTBF), even though it's the most basic measurement that quantifies reliability. MTBF is the average time an asset functions before it fails. So, why don't they measure MTBF?

**Reason 1:** Work orders don't capture all emergency work. Many companies have rules such as, "A work order will be written only if the equipment is down for more than one hour." This rule doesn't make sense. Let's say, for example, a circuit overload on a piece of equipment trips 100 times in a month. Many times, small problems lead to major asset failure. Don't wait until a small problem becomes a big one. Start tracking MTBF and you'll be on the road to reliability. Eventually, you'll learn to manage your assets proactively according to their health. Then, you'll see your MTBF improve dramatically.

**Reason 2:** Not every asset is loaded into the CMMS/EAM. This is a problem that makes writing an emergency work order impossible. If you're not tracking every asset down to the component level, you can't possibly identify any true reliability issue. Think about it this way: if 20% of your assets eat up 80% of your resources, wouldn't you want to identify that 20%, the bad actors? Put all of your assets in your CMMS/EAM, track the MTBF and the bad actors will become obvious.

**Reason 3:** It isn't important to measure MTBF because other metrics provide equivalent value. Yes, you can get asset reliability from other metrics, but keep it simple by using MTBF. Count the number of breakdowns (the number of emergency work orders) for an asset during a given time interval. That's all it takes to learn how long the equipment runs (on average) before it fails.

**Reason 4:** The maintenance organization is in such a reactive mode that there's no time to generate any metrics. They're constantly scrambling merely to react to the latest crisis. But, taking a small step in the right direction — tracking just one measure of reliability — will reveal the 20% of the assets that are burning 80% of the resources. If you start with the worst actor, you'll be surprised at how quickly you can rise out of the reactivity quagmire.

For example, a plant manager who recently measured the

MTBF for what he called his "Top 10 Critical Assets" was shocked at the results. He expected the combined MTBF for these assets would be around eight hours to nine hours. In the first month of this initiative, he found that the actual MTBF was 0.7 hours. You may find yourself in the same situation. You'll never know the true reliability status on your plant floor until you begin measuring it.

**Reason 5:** There are too many other problems to worry about right now without being pressured to measure reliability, too. I've heard this many times and what it tells me is that the organization is in total reactive mode. This organization deals only with the problem of the hour. If 20% of your assets are taking 80% of your resources, dig yourself out of the problem by attacking the assets that cause the most pain — the high-payoff assets that will respond to a reliability improvement initiative. We've got to stop fighting fires. The characteristics of adept firefighters include:

- High turnover of personnel (mostly in production).

- Maintenance costs that continue to rise.
- Maintenance costs that are capped before the month ends ("Don't spend any more money this month. We're over budget.")
- Every day is a new day of problems and chaos.
- Maintenance is blamed for missing the production goals.

It isn't easy to fight fires and initiate reliability improvement at the same time, but it can be done. Start measuring MTBF and attack the high-payoff assets. You can't change a company's culture from reactive to proactive overnight, but you can eliminate reliability problems one major system at a time. That's where you'll find a rapid return on investment. Change people's activities and behaviors slowly and you'll transition to a proactive culture.

Asset reliability is the key to keeping a company profitable, increasing its capacity and reducing its maintenance cost. In a future column, we'll present some reliability improvement ideas.

You can contact Ricky Smith, CMRP, at [rsm](mailto:rsm) if you would like a copy of Smith's "MTBF User Guide," send him an email

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