TPM Introduction

What follows is a basic summary of Mike Wroblewski’s presentation as captured on video.

Our goal with Total Productive Maintenance, or TPM, is to achieve maximum equipment effectiveness through total employee involvement. That means management, operators, and maintenance.

A lot of people think it’s just a maintenance thing when they think of TPM, but it’s not. It’s trying to get everybody involved, this means getting everybody involved and what is everybody’s role in a TPM process.

What we’re looking for is a machine with stability and effectiveness. Sort of like the old fashioned Maytag repairman. Who sat and waited for calls because things were running so smoothly. That’s the kind of processes that we want to have set up.

Typically, we often see the attitude of, “I operate the machine and you fix it, I as the operator work on the machine and you in maintenance fix it.” We want to shift from this to an attitude that whereby all associates treat the equipment as their own.

How many people have had the luxury of buying a brand new car? How did you treat that car the first week you had it? Where did you park? Were you worried about who was parked next to you? How were you when you drove it? Did you notice the potholes a little bit more? Now that summer, how often did you wash it and clean it? Were you allowed to eat or drink inside when you first had it?

Ok now, what if you had the car for about 5 years? You may have gotten rid of it already, yes, but some of us keep our cars a little longer. So, if you kept the car longer, how did you treat that different from your very car fresh off the lot? Do you worry so much about spills? Who do you park next to? Do you hit an occasional pothole? Perhaps the car gets washed when it rains?

Now knowing that, knowing that’s part of human nature to sometimes act like this we must look at our equipment in the plants. Are they looking and operating like a brand new car off the lot? Or are they looking like you’ve had that car for 5 years?

And how do people treat that piece of equipment as a result? If we treat our equipment well, do you think others will treat it well? More than likely.

So what we want to do is focus on our teamwork. Look at skills. Look at how operators interact with the machine. Look at maintenance. We’ll interact with the machine. We want to make sure our machines are more available to do work. That doesn’t mean it’s working all the time, but it should be available to do work all the time.

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Remember we don’t want to over produce and we want to look at how can a good TPM approach save us money, so we’re not replacing equipment prematurely or spending a lot of money on repairs.

Again, this is not just a maintenance department program. This is not just an event or workshop, although typically when we teach a TPM we tie it to a Kaizen event, because this is just like swimming. Like we mentioned earlier, before we can talk about something we actually have to get our hands dirty and start doing it.

Next, TPM is not a way to eliminate trade skilled staff, which are typically considered a cost or expense to companies. We’re not trying to eliminate maintenance or high skilled and we’re not trying to make operators into skilled tradesmen, that’s not the approach either.

Additionally, we’re not trying to get operators to replace the role of maintenance. These are a few of the most common misconceptions when people think TPM.

Mr. Itto once said, “Machines and equipment are the heart of our factories and offices.” So if we have good hearts, we have good health, good companies.

Speaking of our health, how should we treat ourselves?

Well we probably don’t follow all of these practices, but we know if we exercise regularly, say 30 minutes of a brisk walk every day we’ll be in better shape. If we eat 5-6 small meals instead of 2 large ones and one at 8 o’clock at night when we get back home, and if we get checkups regularly... if we did all these things, we would be in a better healthy condition than if we didn’t.

Now looking at that as an example of our health, let’s look at our own equipment. If we exercise by sorting, straightening, and shining, by giving proper lubrication and air filter changes and doing performance checks on it would our equipment operate in a healthier manner? Well, yes.

So this is the approach we want to take. Now there are a lot of opportunities in this. When you have a failure in a piece of equipment that’s usually the tip of the iceberg. There are a lot of hidden defects in machines when we go deeper into the machine, and usually that doesn’t surface unless the machine breaks or it doesn’t perform but their existing.

What we’re trying to do is uncover some of these hidden issues and correct them while they are still small. We want to build a very strong healthy company; we also want to build stronger people. If we incorporate people into operating the equipment we’re also developing and building them in the process of understanding the machine and we want to focus on zero breakdowns and zero losses.

Now a lot of people have trouble with these zero goals. For instance do people have a safety goal? Do you have a safety goal? What’s your safety goal? Zero. Do you have a quality goal? Is it zero? OK, that’s good. Some companies don’t. Some companies say, uh safety goal? We’ll allow .5 incidents per 3 months or something along those lines.

So they’re saying, yes, we’re going to have some accidents and this is the acceptable level of injuries we’re going to have on our people. No, I say zero should be our goal. The same thing with quality, it
should be a zero goal. We don’t want any defects; we don’t want any quality issues to our customers. Same thing with our equipment.

We want to take the bulls stance of saying we want zero breakdowns, zero losses in our equipment. We don’t want to accept that it’s going to happen; at least our goal is to reach that perfection level even though we’re not there yet.

So we want to prevent breakdowns. We want to look at modifying our equipment to prevent those breakdowns and make it easier to maintain them. And we’ll explain more on what that is later in the course.

And we want to look at designing and installing equipment that needs little maintenance. So we want to buy equipment that is not going to be a maintenance nightmare. And we’re going to work at how we repair things.

OK, these are the 8 key strategies and we’ll cover most of them at various levels in depth. But we want to focus on how to make equipment more efficient. What does that mean?

Autonomous maintenance occurs when we involve the employees. What is a planned maintenance? What does that look like for maintenance? What kind of training should we do?

What about early equipment management programs? When you buy new equipment, what is quality maintenance activities? A system to make sure we have the admin to support it and what kind of system do we look at for safety and environmental issues?

These are the basic 8 pillars that we look at in a full TPM process. What are the realities that we’re all facing right now, today? Because that’s all good for what we want for a full TPM, but right now today, I’d have to say that it’s a true statement that machines do breakdown, right? Right now today, so let’s deal with today first and then move to where we need to go to. Machines do breakdown.