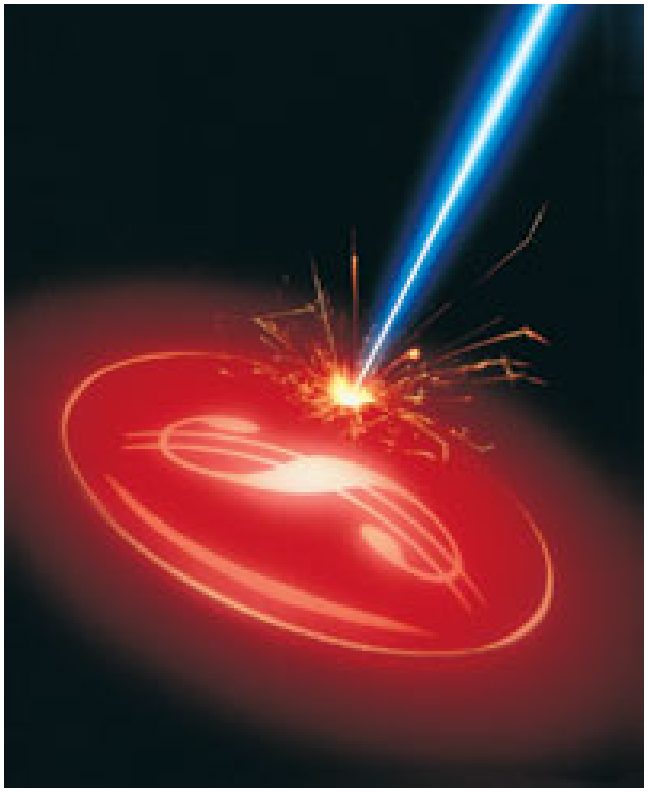
MODULE 5

# LESSONS ON RELIABILITY

# LESSON # 1 ON RELIABILITY

***Focus must be on RELIABILITY & not cost, because if RELIABILITY starts to improve COST will definitely go down, there will be times that focusing on COST will tend to hurt RELIABILITY, it cannot be the other way around. Having a low cost maintenance is a consequence of good maintenance practice***



- **The goal of any maintenance is to improve equipment's reliability, once reliability starts to improve cost goes down & it's not the other way around. Cutting cost on maintenance will definitely not improve reliability.**
- **Reducing cost had been a focus for most maintenance managers and that perhaps, we need to learn from the lessons of history. Cost must be studied thoroughly not just based from its initial cost but on the entire life cycle cost of the equipment . . . . .**

# LESSON # 2 ON RELIABILITY

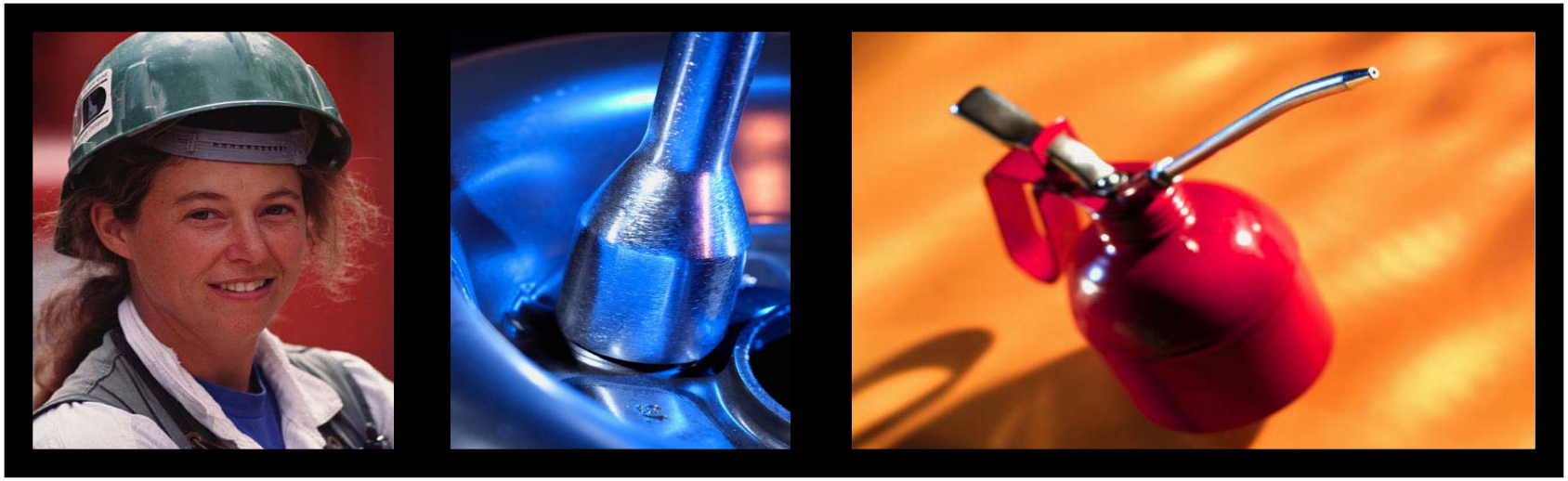
- ***Never ever accept failures in your plant. Trouble shooting is no longer an effective strategy. In today's competitive world, the analysts finds real solutions to the problems***

- **When we get really good at doing things then something is wrong because we are doing it much often, but when we expect a different result from the same tasks we are doing then this is simple not possible, the Chinese called this INSANITY . . . . .**

- **The new paradigm is that FAILURES MUST NOT BE ACCEPTED it can be eliminated if we know the right tools to address them. The true job of maintenance is to eliminate failures & not fixing them all the time . . . . .**

# LESSON # 3 ON RELIABILITY

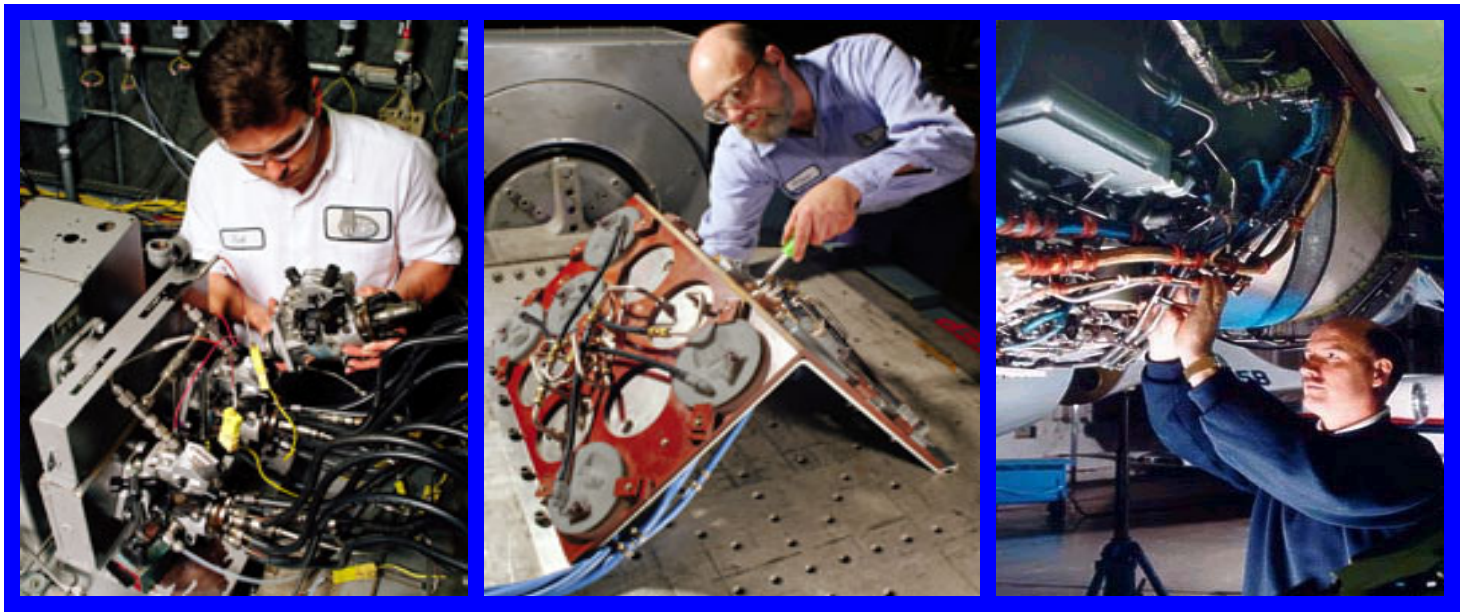
- ***The best time to address a problem is when it is small. It is very hard to advance to any form of specialized maintenance activities and improvement efforts if equipment's Basic Condition had not been well established. Always remember our equipment is a shared responsibility for both operators & maintenance people, a lesson we must all learn from the Japanese.***



***Performing maintenance on the equipment is not the sole responsibility of the maintenance department, this should be a shared responsibility for operations and maintenance . . . . .***

# LESSON # 4 ON RELIABILITY

- *In a **REACTIVE ENVIRONMENT**, we always complain that we lack man-power resources to address failures, but once equipment starts to improve we always wonder where they have been in the first place . . .*



- *In reality maintenance is not outnumbered, they are just too busy working with breakdowns. Maintenance is not measured by how fast we repair but on how we are able to eliminate the failure itself*

# LESSON # 5 ON RELIABILITY

- ***Every failure has a specific set of consequences, being PROACTIVE has something to do about reducing or eliminating the consequences of failure to a minimum rather that completely eliminating the failure itself . . . .***

- ***The best maintenance strategy to adopt will always have to be based upon the consequences of the failure itself***

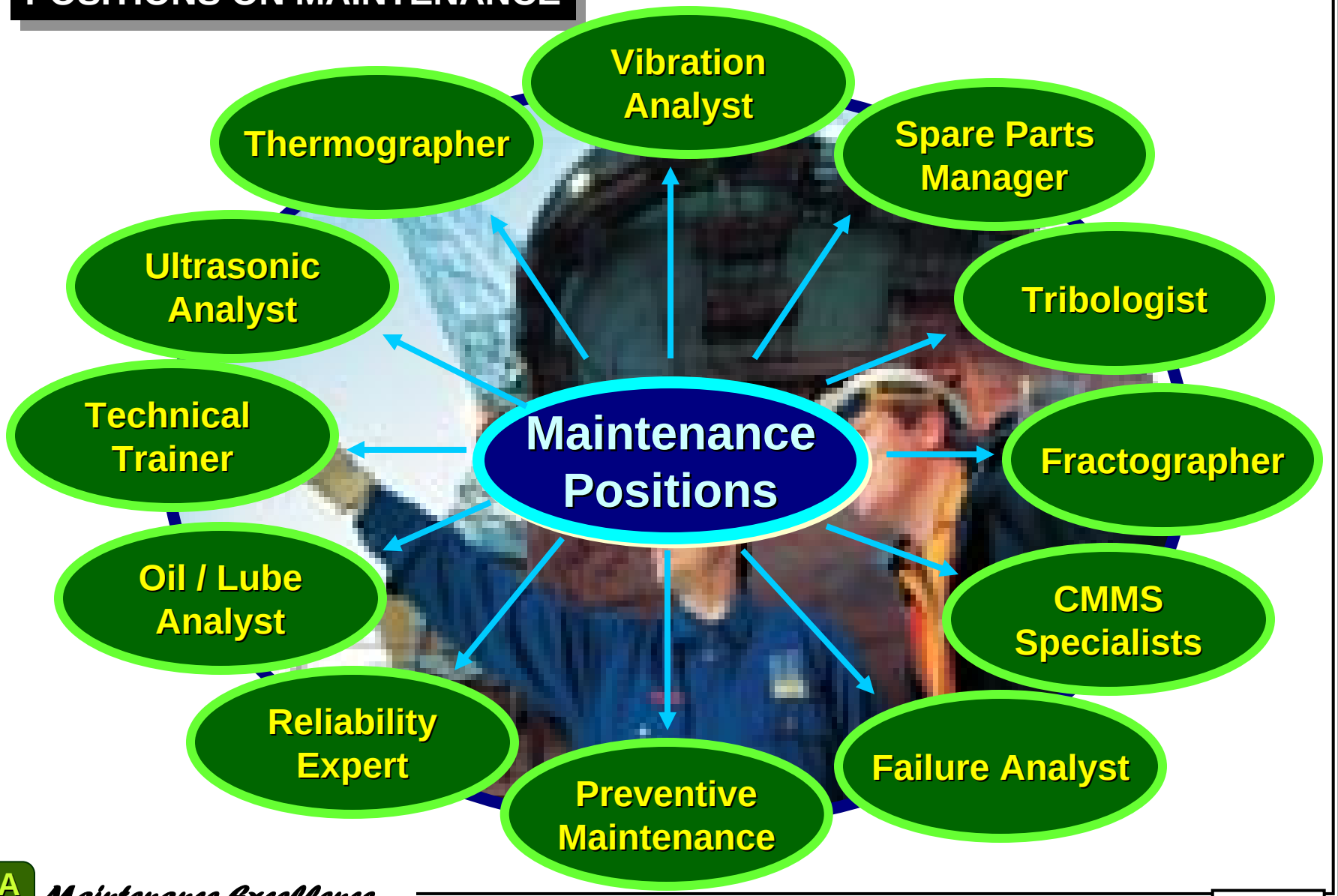
- ***The first thing to ask in the event of a failure will be what is the consequences of the failure if it occurs on its own and will the failure be acceptable to the user or not . . . .***

# LESSON # 6 ON RELIABILITY

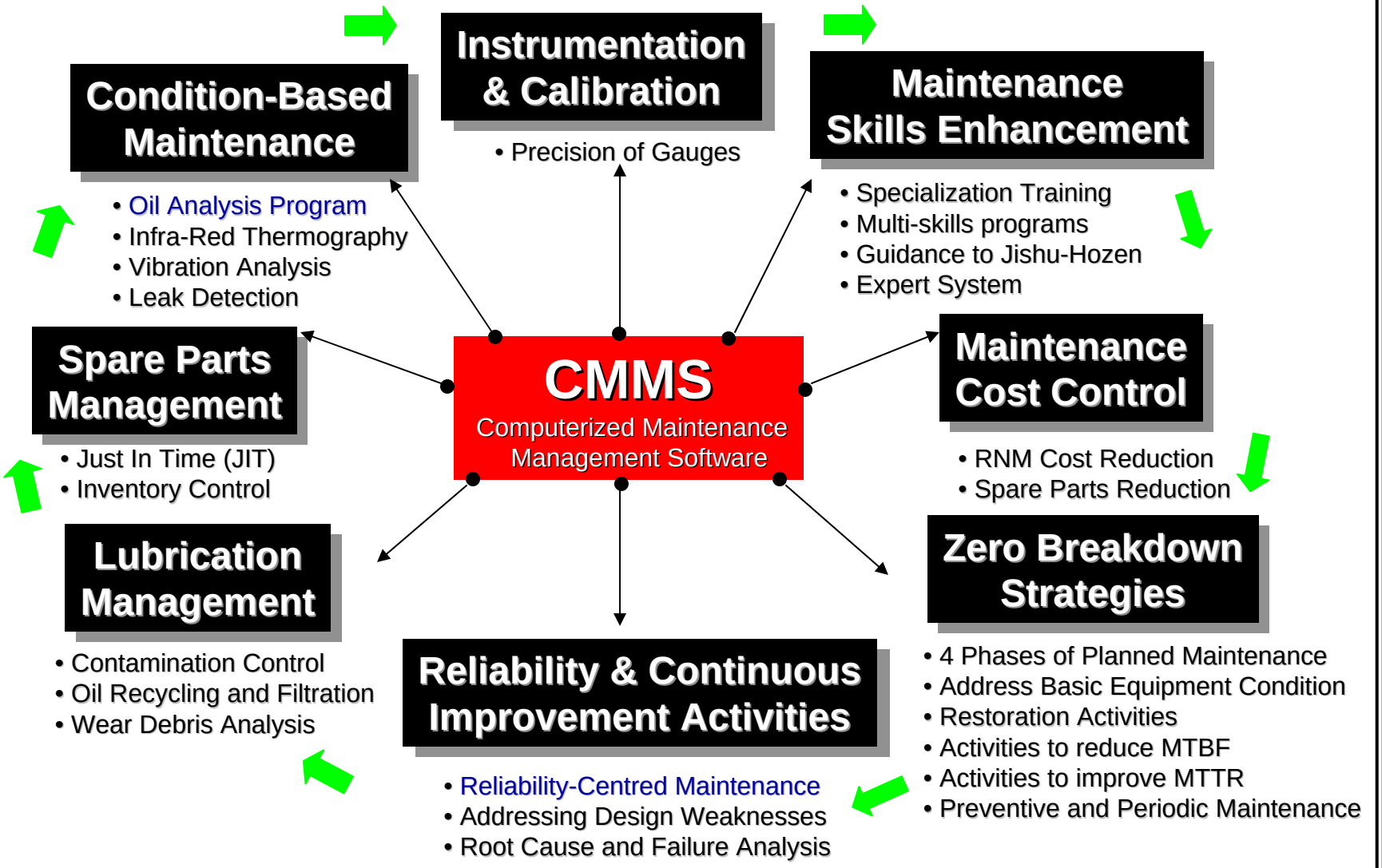
- A question on why industry remain reactive may lead to a thousand reasons or more & those who fear that improving reliability may lead to elimination of jobs are right only to the point where they resist change. Increasing reliability is not achieved by cutting manpower nor are they contrasting goals. Increasing reliability means slowly getting out of the repair business so that new doors will open to maintenance function

- The best positions in industry always belong to the maintenance function, however, most industries groomed their people to be mechanics rather than being a maintenance. Always be proud that you belong to the maintenance function . . . .

# POSITIONS ON MAINTENANCE



# WHOLISTIC & WORLD CLASS MAINTENANCE APPROACH :



# LESSON # 7 ON RELIABILITY

- The real mission of the maintenance department is to provide reliable physical assets & excellent support for its customers by reducing and eliminating the need for maintenance. Do not confuse maintenance as synonymous to repair, these 2 are entirely different.

- The distinction between a true blooded maintenance & a mechanic is a maintenance uses more of his brain than his hand while a mechanic uses his hand much of the time. Let us treat our people as maintenance & not as mere mechanics

# LESSON # 8 ON RELIABILITY

- There is no silver bullet program or strategy that can transform a plants reliability overnight all will start with its basic foundation and that is by "EDUCATION" and this is the most most powerful weapon to change the mindset of our people

- Reliability is not a program with an end but a culture without an end, its the same as any continuous improvement philosophy . . . .

# LESSON # 9 ON RELIABILITY

- Always remember that in any Reliability Improvement Initiative, the focus must be on the people provide them with the skills they need & these skills will be used to improve their equipment. People will improve their machines and it is not the other way around

- The saying that the companies greatest asset is its people is not always true in the real world of manufacturing. What is correct is that, the right people will be the companies greatest asset. There are people who wants to learn and there are people who never learn