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RELIABILITY CENTERED MAINTENANCE

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ABSTRACT

To provide error free work, factors such as training, tools, time and teamwork are absolutely essential for employees in any organizations. Training is essential to prepare the employees to do the job right the first time. Well maintained tools provide the means for the employee to excel. Time is necessary to ensure that the job is done right every time. A support team that works like a well-oiled clock is needed to make everything come together at the right instant and place. All four of these factors are required to reach the level of excellence needed to compete in today's challenging world. Infact, today's competitive battle is not being fought on the factory floor but is in the support areas. This is the reason that Reliability Centered Maintenance is so important to both high-tech and low-tech companies. To succeed in manufacturing today, one must have the right equipment and it must be superbly maintained.

There are many problems with maintenance programs today. Some equipments gets too little, while some gets too much preventive maintenance. Operators are not trained to understand how the equipment works. They are trained to know how to run it but that is not enough. Maintenance people do not take time enough to truly understand why things fail. Maintenance reporting system as a whole are poor and do not provide the data required to diagnose complex problems.

Recently, maintenance job has become very complex and demanding. The complex interface existing in much of the equipment requires a knowledge of the mechanics, programming and electronics that would challenge any engineers. With such a complex problem facing management, one proven approach to solving these seemingly insurmountable problems rests with a relatively new approach to maintenance called *'Reliability Centered Maintenance'*.

1.0 INTRODUCTION

Although product development and manufacturing engineering have been the dominant technical disciplines in the country's industrial community, one can never deny the importance of the part played by operations and maintenance (O & M). Infact, in the U.S, O & M is now a peer with the development and manufacturing disciplines. There are compelling reasons for this, not the least of which is the decisive role that O & M now plays in issues ranging from safety, liability and environmental factors to bottom line profitability. With O & M now becoming more and more vital, Preventive Maintenance optimization is providing never before seen opportunities and challenges.

Before looking into Preventive Maintenance (PM) and what is Reliability Centered Maintenance (RCM), lets look at a few basic definitions:

Maintenance:	Ensuring that physical assets continue to fulfill their intended functions.
Corrective Maintenance:	The performance of unplanned maintenance tasks to restore the functional capabilities of failed or malfunctioning equipment/systems. Usually they are more costly than preventive maintenance.
Preventive Maintenance:	The performance of inspection and/or servicing tasks that have been preplanned for accomplishment at specific points in time to retain the functional capabilities of operating equipment/systems.