



In industries today, the law of the jungle applies, *survive or be left behind*, that's why the need to adopt the best maintenance practices is a must . . .



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COMPANY PROFILE

RSA RELIABILITY AND MAINTENANCE CONSULTANCY FIRM is a single proprietor firm that provides high quality training and consultation on Reliability and Maintenance Best Practices for both local and foreign Industries. It offers industries the opportunity to uplift the technical competence on their maintenance human resource to a level of world class excellence by capturing Industries Best Practices. These courses provides in debt details and wealth of information on Maintenance Best Practices because it believes that these strategies are what every industry needs to improve their equipment's reliability as each of them lower down their operating cost.

Its mission is to elevate the knowledge of Philippine Industries by sharing with them the Proven Best Maintenance Practices and the most advance Continuous Improvement tools and strategies. RSA firm was established and born out of the need for industries to upgrade the skills and knowledge of every industry's maintenance engineers and professionals.

Our firm believes that in order to provide better and skilled maintenance people, they should start with the very basic foundation and that is by educating themselves with the basic principles of equipment's reliability. This firm offers industries with a wide selection of specialized courses on Reliability & Maintenance as these courses are designed for every maintenance engineers and professionals whose mandate is to optimize their equipment's reliability at the lowest possible cost.

Our services includes exclusive consultation and training on the following

COURSES ON TOTAL PRODUCTIVE MAINTENANCE :

- Understanding Total Productive Maintenance - JIPM Approach
- Understanding TPM's Autonomous Maintenance 7 Steps to Operators Empowerment
- Planned Maintenance - Four Phases To Zero Unplanned Breakdown Strategy
- Understanding TPM Focused Improvement - Kobetsu-Kaizen Pillar
- Relationship Between Equipment Losses and Overall Equipment Effectiveness

COURSES ON RELIABILITY AND MAINTENANCE STRATEGIES :

- Lubrication Strategy - Understanding The Importance of Oil Contamination Control
- Reliability-Centred Maintenance for Industries
- Optimizing Equipment's Reliability - Gearing From Reactive To Proactive Maintenance
- Understanding Condition-Based Maintenance - Total Approach To Failure Prediction & Analysis
- Root Cause Failure Analysis for Equipment – Understanding Equipment Failures
- Optimizing Preventive Maintenance Strategy
- FMEA/FMECA
- Understanding MRO Spare Parts and Storeroom Management

COURSES ON RELIABILITY AND MAINTENANCE CONCEPTS :

- Meaningful Measure of Equipment's Performance - Understanding OEE, MTBF,MTTF, MTTR, MTBA
- Basic Maintenance Concept - Gearing From Reactive to Proactive
- Maintenance Strategies Part 1 - Overview on Predictive Maintenance and Lubrication Strategy
- Maintenance Strategies Part 2 - Overview on RCFA and Basic Maintenance Concept
- World Class Maintenance Management - The 12 Disciplines
- Achieving Proactive Maintenance - A Culture Of Reliability
- Basic Concept of Reliability and Maintenance
- Advance Maintenance Leadership – Best Practices in RCM, TPM, LUB and RCFA

Serving Maintenance Mankind Worldwide

Rolly Angeles



COMPANY PROFILE

Our Services includes the following

- Provide guidance on starting up a Predictive Maintenance Strategy in your plant
- Facilitation and consultation on Reliability-Centered Maintenance
- Conduct initial assessment on maintenance Technical Training Needs Analysis
- Facilitation on Strategic Planning for the Maintenance and Reliability Professionals
- Provides initial assessment of plant's maintenance structure and recommendations
- Consultation on Setting-up and Oil Contamination Control in your Plant
- Implementation of TPM Planned Maintenance Pillar
- Implementation of TPM Autonomous Maintenance Pillar
- Implementation of World Class Maintenance Management - The 12 Disciplines
- Maintenance Assessment to determine where you currently stand
- Provides high quality and impact training on the courses provided and selected by industries
- Jump-start TPM activities on plants initiating TPM strategy
- Conducts regular assessment, facilitation and consultation on TPM activities
- Provide guidelines and directions on how to initiate the different pillars of TPM
- Facilitate strategic maintenance session for the maintenance people
- Facilitation on Root Cause Failure Analysis implementation
- Provides a detailed step by step approach on plants initiating a lubrication strategy in your plant
- Provides a detailed approach on how to maximize a condition-based strategy in your plant
- Provides facilitation and consultation on Reliability-Centred Maintenance activities
- Conduct initial assessment on plants current maintenance structure and provides recommendation
- Assess maintenance craftspeople training needs analysis
- Conduct Maintenance Assessment for Industries

In addition to the above, **RSA RELIABILITY AND MAINTENANCE CONSULTANCY FIRM** is A duly registered firm with the following details :

- a) DTI Certificate Number : 00167662, issued on June 27, 2005 at Calamba, Laguna
- b) City Permit Number 0167154, issued on July 7, 2005 by the Office of the Mayor, Sta. Rosa, Laguna.
- c) Income Tax Type : Value Added Tax (VAT) with TIN Number - 239-886-745-000

Mr. Rolly is one of the World Class Best Trainers I have come across during my 28 years career. The course was built up very methodically in the most simplest way. His presentation skills and his command on the various Maintenance Strategies made the workshop very interesting. Mr. Rolly is one of the few Maintenance Professionals I have come across who is very much attached and dedicated to the Maintenance Profession. His wealth of experience and his humor made the RCM Workshop even more interesting. The structuring and delivery of the concept enables all the participants to initiate RCM studies very confidently. The training material provided by Mr. Rolly was excellent and was prepared with great care to ensure that all the participants are fully benefited. I am sure that all the participants in this three day workshop have been benefited by his technical and intellectual sharing of his knowledge. From Srinagesh Dy, General Manager, Reliance Industries Ltd., India

With my almost 30 years of my maintenance experience in the field of electrical engineering both in mining and power industry. I though I was well equipped as a good maintenance, but after this training, it was reversed. The best thing I have learned today is to go back to the basics and from there practice and apply the 12 Disciplines of Maintenance learned one at a time. From Pablo Dulay Jr. Maintenance Planner, Sual Power Plant, Team Energy Corporation, Philippines

Serving Maintenance Mankind Worldwide

Rolly Angeles



CONSULTANT'S PROFILE & EXPERIENCE . . .

29 years of experience on maintenance and reliability . . .

- **1985** - Graduated from Mapua Institute of Technology with a degree of Bachelor of Science In Mechanical Engineering (BSME)
- **1986** - Passed PRC Licensure Examination for Mechanical Engineering
- **1987 - 1988**
Worked as a Preventive Maintenance System Specialist for Superior (SG) Shipping Corporation
- **1988 - 1994**
Worked as a Product Development Engineer at Sharp (Phils.,) Corporation
- **1994 - 2002**
TPM Senior Engineer at Amkor Technology Philippines specializing on the TPM Pillar of Planned Maintenance, Focused Improvement and Early Equipment Management
- **2002 - 2004**
Worked as a Technical Training Specialist at Lepanto Consolidated Mining Company focusing on Reliability and Maintenance
- **2005 - Present**
Establish RSA Reliability and Maintenance Consultancy Firm and provides consultancy and Training on Maintenance Best Practices



Rolly Angeles is a seasoned technical and international reliability and maintenance consultant. He had been invited in different countries and had conducted reliability and maintenance trainings in United Arab Emirates, India, Malaysia, Indonesia, Thailand, Nigeria, Bangladesh, South Africa, Bostwana and recently in Brunei. His portfolio of reliability and maintenance trainings includes maintenance management and reliability courses on Total Productive Maintenance, Planned Maintenance, Autonomous Maintenance, Lubrication Strategy, Understanding Tribology and Importance of Understanding Oil Contamination Control, Condition-Based Maintenance, Predictive Maintenance, Reliability-Centered Maintenance, Root Cause Failure Analysis, Planned Maintenance, Autonomous Maintenance, TPM, World Class Maintenance Management, MRO Spare Parts and Storeroom Management, FMEA/FMECA, Advance Maintenance Leadership, Maintenance Indices, KPI and more. Rolly is a graduate of B.S. Mechanical Engineering from Mapua Institute of Technology in the Philippines, batch 1985 and passed the licensure board examination the following year in 1986. With 28 years of solid experience, he has worked in various industries from shipping, woodworking, foundry, cast-iron machining, assembly lines, semi-conductor manufacturing and mining industries. From 1994 to 2002, Rolly worked as a TPM senior engineer at Amkor Technology Philippines, a multi-national company engaged in the manufacture of integrated circuit products and spearheaded Amkor's Planned Maintenance Organization composed of maintenance managers and engineers. He was responsible for the dramatic reduction of their equipment unplanned breakdowns in their TPM journey. He also spearheaded RCM implementation on their facilities air handling units and sub-station equipment. Here he had gained total hands-on experience and understanding of both TPM and RCM respectively. His last corporate employment was in 2002 where he worked as a technical training specialist at Lepanto Consolidated Mining Industry. In 2005, he decided to establish his own consulting business, RSA Reliability and Maintenance Consultancy Firm where he dedicates his time working as an independent reliability and maintenance consultant, provides in-house training, consultation and facilitation to different industries on maintenance best practices.

Serving Maintenance Mankind Worldwide

Rolly Angeles



Rolly Angeles – Author World Class Maintenance

This book depicts the life and struggles of maintenance in seeking better ways and means in improving how to manage and maintain their equipment's and assets. The Author of this book shares his passion and experience about the day to day struggles in the life of a maintenance. What is interesting about the Author and his book is that Rolly hails from the Philippines, but the problems, issues and struggles we face in maintenance is generic and can be felt by any industry from whatever location, place and race. This book contains real life stories, situations and actual experiences by the Author in his career in maintenance and currently as a Reliability Consultant.



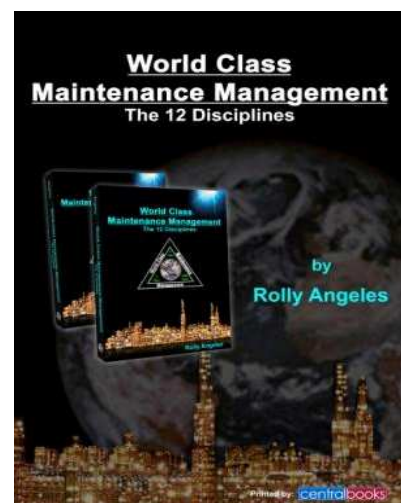
The book is easy to absorb as it is structured into three parts which are the Basics, the Strategies and the Advance Disciplines. The 12 Disciplines are grouped accordingly into these three parts. Maintenance often time seek for advance ways in dealing with their everyday problems and issues. The message of this book is simple and straightforward, that there is no better way to start by going back to the "Basics" and addressing these very small problems we have in our plant. Big problems, unplanned breakdowns and catastrophic failures are just an accumulation of small problems that had always been ignored and mostly neglected in the first place.

The Author strongly emphasize the importance operators play in addressing the basic equipment condition and is considered a partner with maintenance on this shared responsibility they have towards their equipment. It is a very difficult or impossible tasks for the maintenance people to transcend from a reactive to a proactive mode if operators will not be involved along the way. When the Basics had been set and well established, then maintenance can move on with the different maintenance and reliability strategies which are explained in detail on this book. Each Chapter covers a specific maintenance discipline. Chapter 14 of this book covers an implementation plan on how to proceed with these disciplines by understanding where the current maintenance is and bringing the maintaining herd on the direction which they want to go. Finally, the Author would like to share his message on the Conclusion Part of this book and share his actual experience on what it takes for an industry to reach a level of World Class Maintenance Management Stage.

More Book Review at <http://www.rsareliability.com>

Rolly, your people-focus on reliability improvement and your commitment to helping people grow through improving their understanding of equipment and of themselves come through loud and clear in the book. The workplace stories you tell will resonate with people working in operations and maintenance in every industry. I very much like that you have provided practical answers with explanations and examples of how companies can move up the path to world-class maintenance performance. You have written about TPM, RCM and RCA with great passion and obvious depth of knowledge and experience. I've learnt much more about the right way to use those tools by reading your book than I ever understood before. There is no doubt that the World Class Maintenance Management - The 12 Disciplines book will become a well-thumbed reference book for me. Rolly, I've been fortunate to come across you and value your honest perspectives and insights on doing maintenance right. I share your desires for what maintenance can become and do for a company and hope that we can combine our efforts in the future.

By Mike Sondalini, Reliability Consultant, Lifetime-Reliability, Australia





Rolly Angeles – Network of Reliability Friends



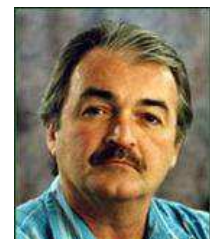
I have been communicating with Rolly on an increasing basis ever since he joined our international Root Cause Forum. The more I talk with him, the more impressed I am with his breadth of experience in reliability-related fields. Rolly and I have been sharing thoughts & materials relating to Root Cause Analysis and are considering forming a professional affiliation to expose Rolly to some of Failsafe's clients, and also to expose some of Rolly's clients to Failsafe. From Bob Nelms – CEO of Failsafe Network US



Congratulations on such a great knowledge sharing site. You are a very good person to help the maintenance and reliability community and you will build a good customer base as a result. I also want to thank you for all the knowledge you contribute at the forums. You are doing a great job and we support your fine work. – Terrence O Hanlon CEO of Reliabilityweb.com



As a well experienced RCFA and TPM practitioner, Rolly Angeles is the man I would turn to if I needed help in the Far East. He has a fund of knowledge, a patient approach to those who are less well informed, and eagerness to help. Vee Narayan Maintenance Consultant from UK



Although Rolly and I live and work on the opposite sides of the earth, our travels take us to some of the same places. My wish is to do a joint seminar with Rolly. Rolly is dedicated to his work and mission. I believe our joint information on RCM and Industrial Pumps will complement each other and most benefit the seminar attendees. I believe Rolly and I will make a good team. From Larry Bachus – better known worldwide as the pump guy



Rolly Angeles first contacted me to let me know that he provided industrial maintenance and reliability training. Improving industrial maintenance performance is a passion we share in common. His resume as an industrial maintenance trainer was strong and his coverage of industrial maintenance and reliability improvement training courses broad. When I looked at his industrial maintenance and reliability website I could see that he was a man committed to his love of seeing a world class maintenance performance in industrial operations. His obvious experience and knowledge on the important details that produce world class maintenance and reliability performance came through strongly in that wonderful maintenance management book. Mike Sondalini – President Lifetime Reliability from Australia



Rolly is so passionate about anything that is maintenance-related, and anything that can help maintenance people improve their system and practices. He is able to combine his years of maintenance experience with new ideas from his research and study and his interaction with maintenance gurus. I have worked with Rolly conducting seminars and was very impressed with his knowledge of the subject he teaches. He is an asset to the maintenance world, and I just wish him success. Hermie Dumbrigue – Tribologist



RSA RELIABILITY LISTS OF COURSES

COURSES ON TOTAL PRODUCTIVE MAINTENANCE

TPM - Understanding Total Productive Maintenance – JIPM Approach (3 days)

In today's manufacturing industries, more and more companies are seeking ways to improve their plant's performance through the application of continuous improvement tools such as TPM. Although it originated from the Japanese, TPM is not culture bound but rather its principles can be applied to any culture as long as people accept TPM as a way of life. TPM improves the manufacturing process through utilization of employee involvement, empowerment and closed-loop measurement of results. Learn the basic principles of TPM and how it can apply to your industry

AM7 - Understanding TPM's Autonomous Maintenance 7 Steps (3 days)

This course shows the importance and benefits of introducing an Autonomous Maintenance strategy and what it will achieve if correctly applied in the workplace. Autonomous Maintenance are the activities in which each worker performs daily cleaning, lubrication, inspection and parts replacement in order to establish Basic Equipment Condition. This course tells us the importance that Autonomous Maintenance is not just the transfer of task to operators but teaching operator that their responsibility does not end from just operating the machine itself. Autonomous Maintenance is about changing the mindset of operators from *I fix you operate to operators take care of our equipment's*

PM4P - Understanding Planned Maintenance 4 Phases To Zero Unplanned Breakdown (3 days)

This course covers the principles of TPM's Planned Maintenance Four Phases to Zero Unplanned Breakdown Strategy. Phase One deals with Stabilizing MTBF, main activity involved here is restoration by establishing our equipment's Basic Equipment Condition. Phase Two is all about Addressing Equipment's Weaknesses in Design & addressing them to prolong the lifespan of parts Phase 3 and 4 of Planned Maintenance deals with developing a Maintenance Tasks Selection Diagram in order to classify which parts will fall on the different maintenance tasks available. Phase Four of Planned Maintenance is all about determining the parts that will undergo Predictive maintenance through a system known as Condition-Based Maintenance & the use of diagnostic tools to monitor parts condition.

OEE - Understanding Relationship Between Equipment Losses and Overall Equipment Effectiveness (1 day)

OEE is the primary measure of performance in TPM. It is calculated by multiplying the availability, efficiency and quality rate of an equipment. This course allows us to understand the 7 major losses we suffer each day and its relationship with OEE. Each losses is being discussed in detail and how it can reduced or eliminated. What is important is for our people to understand what losses our equipment is suffering & how to measure it.



RSA LISTS OF COURSES

FI - Understanding TPM's Focused Improvement Pillar – Kobetsu Kaizen (2 days)

Focused Improvement or Kobetsu-Kaizen in Japanese includes all activities that maximize the overall effectiveness of equipment, processes and plants through uncompromising elimination of losses and improvement of performance. Many people ask about the difference between focused improvement activities that they may already be practicing. The basic point to remember about focused improvement is that if a company is already making all possible improvements in the course of routine work and small group activities, then activities of focused improvement are already in place.

COURSES ON RELIABILITY AND MAINTENANCE STRATEGIES

LUB - Lubrication Strategy – Understanding Tribology and The Importance Of Oil Contamination Control (2 days)

This course covers a wealth of information on the need to implement lubrication strategy in your plant. Learn why world class companies are adopting lubrication strategy, their benefits and what it can do to your plant. One of the problems most industries are facing is that we always end up being reactive despite our best efforts on Preventive Mtce, frequent unexpected failures and breakdowns will always results to high cost of maintenance due to a lack of an effective maintenance strategy. It is with our best intention to share with you this course and resources which can be adopted in your company. It is the intention of this course to share the information and experience on Contamination Control and its benefits to plant production and maintenance people.

RCM - Reliability-Centred Maintenance for Industries (3 days)

Not all equipment are created equal even if they are of the same equipment type. Much of the maintenance requirements have much more to do on how the equipment will be operated or the operating conditions of the equipment. This course covers the principles of RCM which is a process used to determine the maintenance requirements of any physical asset in its present operating context. It entails us by asking 7 questions about the asset that is being maintained. The maintenance requirements of an asset will depend on these 7 basic questions :

- What are the functions associated performance standards of the asset in its present operating context ?
- In what ways does it fail to fulfill its functions ?
- What causes each functional failure ?
- What happens when each failure occurs ?
- In what ways does each failure matters ?
- What can be done to predict or prevent each failure ?
- What should be done if a suitable proactive tasks cannot be found ?



RSA LISTS OF COURSES

CBM - Understanding Condition-Based Maintenance – Total Approach To Failure Prediction & Analysis (2 days)

This course shows the importance & benefit of a Condition-Based Maintenance (CBM) program. The benefits of such a program will be realized in greater equipment reliability and longevity while at the same time enhancing budgetary cost containment goals. Operations and Maintenance will make a sound maintenance & operating decisions based on actual equipment performance rather than relying on the old standard of Time-Based maintenance intervals or even less desirable circumstance or waiting for the equipment to fail in service. According to maintenance specialists, at least \$250 billion of parts are wasted. Ineffective maintenance strategy is responsible for equipment failures, disrupted production schedules, delays in deliveries & poor production quality.

OER - Optimizing Equipment's Reliability – Gearing From Reactive To Proactive Maintenance – Streamlined RCM (3 days)

This course is a streamlined approach on RCM or Reliability-Centred Maintenance. This is a two in one course where the basic principles of RCM are covered & how we can derive an approach on determining our maintenance requirements for our assets based from our existing procedures. OER is a strategy and method for improving the effectiveness of current maintenance programs and strategies. It starts with the existing maintenance program used within the plant. Working in cross functional teams from the shop floor, the team identifies what type of duplication exists within their own environment and what elements of the current maintenance program are useful and what are inappropriate. Once this is completed, the team establishes the most efficient and effective method for managing the maintenance of the asset.

RCFA - Root Cause Failure Analysis – Waging War with Failures (2 days)

It is a common practice due to lack of time and information that equipment and system failures are often investigated at a superficial level. As a result both operators and maintenance keep running unreliable plant, which cause repeated losses & become experts at fixing rather than eliminating the failure. This seminar you will learn to apply several practical systematic method for analyzing performance problems to uncover the root cause that will eventually end all recurring problem making us proactive. Most maintenance are contended with fixing and repairing failures, in fact we accept them as a normal routine work, stock up piles of spare parts in our inventory to make sure that they are available whenever a failure occurs. Fixing failures is a thing of the past for companies who would like to improve their equipment's reliability, their secret, they analyze their failures and determine the Root Cause of the problem so that appropriate solutions can be adopted. ***Trouble shooting is no longer an effective strategy. In today's competitive word of, the "Analysts" find real solutions, that's why the need to understand Root Cause Failure Analysis is a must***



RSA LISTS OF COURSES

COURSES ON RELIABILITY AND MAINTENANCE CONCEPT

WCM - World Class Maintenance Management – The 12 Maintenance Disciplines (3 days)

Being World Class means the ability to compete anywhere in the world. World Class Maintenance Management simply means the art and science of managing maintenance resources performed by best in class industries from around the world. But in most industries, the question is often raised, is it really possible to control maintenance or the pressure over maintenance is controlling us. This course provides a discussion on how failure occurs in 3 zones and why most of our efforts on maintenance only addresses one zone which is the wear out failures. This course also covers the 12 Discipline in order to improve equipment's reliability. These 12 Disciplines are categorized into Three, The Basics, The Strategies and Advance Discipline. Learn what these disciplines are that most World Class companies perform.

MMP - Meaningful Measures Of Equipment's Performance – Knowing MTBF, MTTR, MTBA, MTTF & Weibull (2 days)

As maintenance professionals we know the importance of maintenance to our organization goals and objectives. The difficulty is in translating the overall company strategy to a meaningful measure of performance. The old saying that if you can't measure it, you cannot manage it " is as true for performance as for anything else. Much of what is meant by performance often appears to be immeasurable. It's OK looking at how things happened after the event & traditional measures can do this. What a manager needs is a much more dynamic, real time view of performance as it happens. People are central to this and qualities like motivation, confidence, leadership and perception are what is needed to be understood. But before we can use them we need to understand these measurements.

BMC - Basic Maintenance Concept – Understanding Reactive, Preventive, Predictive, Proactive Maintenance (1 day)

This course covers the four strategies of Basic Maintenance Concept w/c are Reactive, Preventive, Predictive and Proactive and when each of them is feasible to use. Reactive Maintenance : This type of maintenance strategy simply means fixing it only when it fails as the saying goes when it ain't broke don't fix it when it fails then we come and fix it. In Preventive Maintenance, maintenance is performed on a fixed or scheduled Time-Based interval. Parts in which the rate of wear is directly related with age are subject to this type of tasks. Predictive Maintenance is performed not based on time but rather on the condition of equipment with the aide of diagnostic monitoring tools to determine the potential failures and lastly in Proactive Maintenance we are interested to Determine the Root Cause of the failure and correct it permanently to prevent recurring failures from recurring again in our equipments.



RSA Reliability Valued Clients from the Philippines

 CYPRESS LIMITED MANUFACTURING	 AMKOR TECHNOLOGY PHILIPPINES	 LITTELFUSE PHILIPPINES CORPORATION
 SANYO SEMICONDUCTOR MANUFACTURING CORP	 IBIDEN PHILIPPINES INCORPORATED	 ALSTOM PHILIPPINES INC.,
 NEC TOPPAN CIRCUIT SOLUTIONS INC.	 INTEL TECHNOLOGY PHILIPPINES INC.,	 HITACHI GLOBAL STORAGE TECHNOLOGIES PHILS. CORP
 LEPANTO CONSOLIDATED MINING COMPANY	 CENTRAL AZUCARERA DON PEDRO INC.,	 TEAM ENERGY CORPORATION PAGBILAO and SUAL PLANT
 ANALOG DEVICES PHILIPPINE ASSEMBLY & TEST OPERATIONS	 SUNPOWER PHILIPPINES MANUFACTURING LTD.	 MARUBENI ENERGY SER- VICES CORPORATION
 ASIAN TERMINALS INCORPORATED ASIAN TERMINALS INC., PHILIPPINES	 BEST CHEMICALS AND PLAS- TICS INCORPORATED (PHILIPPINES)	 APO CEMENT CORP. CEBU, PHILIPPINES
 ST MICROELECTRONICS	 CONTINENTAL AUTO- MOTIVE SYSTEMS	 CE CASECNAN, NUEVA ECIJA, PHILIPPINES
 ENERGY DEVELOPMENT CORPORATION, ORMOC, LEYTE	 PASAR CORPORATION LEYTE, PHILIPPINES	 HAWAIIAN PHILIPPINE COMPANY NEGROS OCCIDENTAL, PHILS.,



Industries We Have Rendered Service Internationally



**SAIPEM ENGINEERING
NIGERIA LTD.**



**Hermann & Cross Ltd.*
HERMANN AND CROSS LTD.
(NIGERIA)**



**STERLITE INDUSTRIES LTD.
TOTICURIN, INDIA**



**BHARAT PETROLEUM CORP.
MUMBAI & KOCHI REFINERY,**



**SHELL PETROLEUM DEVELOP-
MENT COMPANY (NIGERIA)**



**RELIANCE INDUSTRIES LTD.,
KAKINADA, INDIA**



**HARIPUR AND MEGHNAGAT
POWER PLANT NARAYANGANJ,
BANGLADESH**



**ARABIAN POWER, ITM O&M
COMPANY LTD, ABU DHABI,
UNITED ARAB EMIRATES**



**TRIDENT GROUP
PUNJAB, INDIA**

SHELL AND SAIPEM ENGINEERING (Nigeria)



Reliability-Centred Maintenance
Training at Nigeria



Reliability-Centred Maintenance
Training at Nigeria



Reliability-Centred Maintenance
Training at Nigeria



Reliability-Centred Maintenance
Training at Nigeria



Reliability-Centred Maintenance
Facilitation at Nigeria



Reliability-Centred Maintenance
Facilitation at Nigeria

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Reliability and Maintenance Consultancy Firm Invites You

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Reliability and Maintenance Courses for 2016



Maintenance is not a department, they are not an organization nor a function but rather, maintenance are humble and down to earth human beings, hence, let us treat them with the respect that they truly deserve because that is all they ask for

...Rolly Angeles

For Industries that have attended our Public Trainings, Maraming Salamat Po!

 ON SEMICONDUCTOR CARMONA, PHILIPPINES	 AMKOR TECHNOLOGY PHILIPPINES	 PSITECHNOLOGIES INC., TAGUIG, PHILIPPINES	 ST MICROELECTRONICS	 HITACHI GLOBAL STORAGE TECHNOLOGIES PHILS. CORP
 Leading Innovation >>> TOSHIBA INFORMATION EQUIPMENT (PHILS.) INC.,	 NPC ALLIANCE CORPORATION	 FUJI ELECTRIC PHILIPPINES INC.,	 INTEGRATED MICROELECTRONICS INC.	 CEBU MITSUMI INC., DANAOCITY, PHILS.
 TRUST INTERNATIONAL PAPER CORPORATION	 SOLID CEMENT CORP. ANTIPOLO, PHILIPPINES	 KEPCO ILIJAN CORP. BATANGAS, PHILIPPINES	 TEAM ENERGY CORPORATION	 TOYOTA MOTORS CORPORATION STA ROSA, LAGUNA
 YOKOHAMA TIRES PHILIPPINES INC.,	 TECHLOG CENTER PHILIPPINES	 PHILIPPINE BATTERIES INCORPORATED	 MOOG CONTROL CORPORATION	 PASAR CORPORATION, LEYTE, PHILIPPINES
 ODJWELL TECHNOLOGY MANILA CORPORATION	 SUNPOWER PHILIPPINES MANUFACTURING LTD.	 ATMEL TSPIC CORPORATION	 SAN TECHNOLOGY INC.,	 LEXMARK INTERNATIONAL PHILIPPINES INC,
 CONCEPCION-CARRIER AIR CONDITIONING COMPANY	 PHILIPS RESPIRONICS RCM MFG. INC.,	 GOTOH PHILIPPINES CORPORATION	 AUSTRIAMICROSYSTEMS PHILIPPINES, INC.,	 BAXTER HEALTHCARE PHILIPPINES, INC.,
 AIR LIQUIDE PHILS., INC.,	 MONARK EQUIPMENT CORPORATION	 MANILA WATER COMPANY INC.,	 FAIRCHILD SEMICONDUCTOR	 REMEC BROADBAND WIRELESS
 PETRON CORPORATION	 SUNJINE PHILIPPINES CORPORATION	 MAXIM PHILIPPINES OPERATING CORPORATION	 AVON PRODUCTS MANUFACTURING INC.,	 JARDINE SCHINDLER ELEVATOR CORPORATION



Testimonies and Feedback from delegates

Previous Testimonies on WCM-RCM Class from Sterlite Industries, India

Coming from a process background, I am now able to understand what goes in maintenance and will now find it easier to keep equipment on my plant in good shape. I will be able to participate more in maintenance activities and will introduce the use of decision diagram in my plant. Propose that this WCM-RCM training is extended to our plant in KCM, Zambia, Clive Makasa, Associate Manager, Process

Very good delivery of the course. Very good examples, video, display and audios. I understood that failures can only be reduced and not eliminated. Every failure has its own maintenance class. Participation of the class was effective. Punctuality of the presenter was excellent. ***I am the first person who should change to make SILL better from the Man in the Mirror, quoted from the late Michael Jackson.*** From Pumolo John Mayungo, Associate Manager, SILL, Zambia

Learnt about the operations responsibility in maintenance. Learnt all failures can't be avoided, some are bound to occur. Excellent presentation and case studies. ***Equipment reliability can be improved via structural maintenance method and that's the biggest learning learnt.*** Complete and thorough subject. Motivated the team to perform RCM. From Snigdharup Das, Engineer Sterlite Industries

Excellent capacity of teaching. Lots of materials availability for training. ***Excellent in knowledge. We all enjoyed the five days of learning. Lots of maintenance tips learned in this training.*** Rajkumnar S, Kumbhar, Associate Manager, Sterlite Industries

RCM is a very great technique and was taught to us in a very systematic fashion. ***WCM is a thoroughly basic fundamental which have been very well explained and it is a great pleasure listening to Rolly's lecture. A must attend for every maintenance personnel and production personnel also.*** From Sridhar K. Head, Mechanical Sterlite Industries, Silvata

Very different way of presentation keeping the class interested all the time. Good correlation between the maintenance aspects and the videos you show to demonstrate the message. It is a unique way and easy way of giving message that otherwise would look subjective. Things taught in simple ways for all of us to understand. Apart from the normal training, it was wonderful for you on your part to ask the audience to do something good in this 5 day class, that was really a good thought and I have done some. Thank You Rolly and "God bless you". Vipu John Mathew, Associate Manager,

It was very useful to recollect the basics of maintenance. Being a technical program, the way in which the faculty explained the concepts was very good and attractive. More positive insights were given during the presentation. The best part is that we are made aware of the lying human and Latent cause behind any physical cause that leads to the failure. The learning materials provided and the case studies presented were very relevant and were very useful to the program. A complete transition/revolution in the maintenance approach attitude can be achieved through this program. The best part is that he used his passion to explain the concepts in such a beautiful way. From R. Rjalaksham, Associate Manager

I was on the opinion that maintenance is all about simply tightening bolt, replacing parts and applying oil. The training has altogether change my view on the term maintenance. It is more than an engineering and RCM is like "a diamond in the crown". To add on about the faculty, a clean, knowledgeable man on maintenance practices. Case studies are marvelous and tasks major part in making us understand better the concept. From M. Shanmuga



Testimonies and Feedback from delegates

Training materials and presentation was excellent. The RCM concept and understanding was useful to carry out maintenance activities and thus helpful in the improvement of reliability. **Mr. Rolly Angeles has impaired the training and conducted the workshop in a very exceptional way.** From Anan Gupta, Senior Officer Maintenance / Electrical, Bharat Petroleum

This training has change my mind frame about maintenance strategy in our plant. **I am very enlighten about the Reliability-Centred Maintenance strategy. Thank You Sir. I love the RCM Decision Diagram and workshop.** From MP Agrawal, DY Maintenance Manager, Bharat Petroleum

I found the RCM concept good. Makes the maintenance activity to be performed in a structured and scientific way. Facilitator knowledge is excellent. **His command over language and though process is very good and keeps the participants interest going.** From VD Wadhwa, Maintenance Manager

The training was an eye opener to the entire team that the best efforts we were putting in till now covers only 20% of the problems. The strategically approach to our maintenance was very well understood. The exercises in RCM was very useful. From BP. Brixley Carolson, Associate Manager Sterlite Industries Ltd.

The course of the training was excellent. The way of presentation was very good doing it with examples. Focusing on reliability is more important than costs. **A team, a plan and a big heart is required for performing the smallest as well as the biggest tasks.** From Manohar Gupta, Associate Manager Sterlite Industries Ltd.

Flow of presentation was excellent. The course content was close to practical maintenance life. Case studies, video clips were very excellent and though provoking. Examples shared were excellent. The teaching to be a simple human being along with technical as well as systematic training was so unique feature of this programmed. Facilitator's openness and ways to transform the knowledge to all of us. From Kurhadkar Sandeep, Associate Manager / Sterlite Industries Ltd.

Excellent training program on World Class Maintenance Strategies and Reliability-Centred Maintenance making participants involved by case studies, videos and real life experiences. Effective communication and lot of though provoking ideas. Creates a way among participants to operate and understand the maintenance function better. From R. Murali Krishnan, Associate Manager Sterlite Industries

The class of Reliability-Centred Maintenance and World Class Maintenance were presented very nicely. The examples given were easy to understand. The workshop on performing an actual RCM analysis was very useful. The approach towards maintenance strategies has been clearly explained. From Ramesh Ganesh, Associate Manager / Sterlite Industries Ltd.



Testimonies and Feedback from delegates

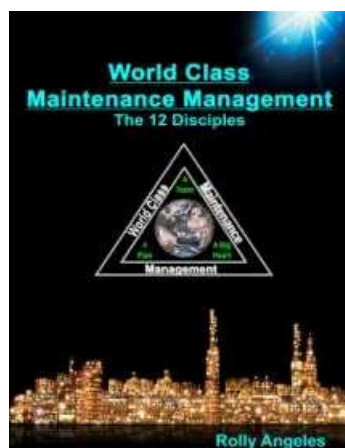
Resource speaker is not selfish. He is really good in delivering the topics and very knowledgeable about it. ***A very informative course & useful not only in the industries , this is something that every body should know. It is one of a kind.*** From M. Natividad / PM Engineer, Union Cement Corporation, Lubrication Strategy, Philippines

Topics on both Oil Analysis and Contamination Control very well covered. The speaker has a very sound knowledge and experience on the topics discussed. The discussion is lively, venue is good and the time was well managed. ***I am glad to know that we have this kind of training locally. The overall quality of the seminar is comparable to the seminar on Oil Analysis I have attended abroad and offered by foreign consultants such as Noria Corporation. This is one approach that every maintenance must know.*** From Al Silva / Asst.. PdM Engineer, Sual Station, Team Energy Corporation, Lubrication Strategy

The thoughts and education of the training are taught clearly. It is a very important help for me & Sanyo if we are going to apply to apply the knowledge we learned. ***Mr. Rolly Angeles is a very inspiring person. His training is very well facilitated. Arigato Gosaimasu !*** Vivian Grace Garcia / Technical Staff, Sanyo Semiconductor, TPM Planned Maintenance

Facilitator is well adept on the subject matter. ***Mr. Angeles is very good in presenting the subject matter as well as his knowledge regarding the subject. With respect to his experience, there is no doubt that Mr. Angeles is one of the best person around to teach the maintenance concept.*** Jeson Solis / Engineer, Sanyo Semiconductor, TPM Planned Maintenance Training

Rolly Angeles is one of the best trainers (World Class) I have ever met in my life. The delivery of the RCM course by him was so smooth and straight to the point. Besides he combined technicality with intellectualism thereby carrying even the most assumed idle time along. The definition of the different tasks in RCM caught most of my attention. The RCM Information Worksheet simplifies the course to enable an ideal team to come up with the best maintenance strategies. Although it is a challenge to convince management team that is not trained on RCM to adopt, I will still insist that RCM is the best maintenance3 strategy world wide now. Kalu Kalu, Head District Maintenance, Shell Petroleum (Nigeria)



Read more feedback and testimonies from people that attended my training at <http://www.rsareliability.com/testimonials.htm>