Their

**Mining Maintenance Management Course**

Paul D. Tomlingson Associates, Inc. Retired

***Maintenance Management for the Mining Industry Since 1968***

***Legion of Honor member - Society of Mining Engineers***



**01 - Maintenance Program Overview** – Learn the who, what, how, when, and why of successful maintenance management. (18 slides)

**02 - Maintenance Terminology** – Essential maintenance terminology is defined to ensure clarity, understanding and correct utilization. (19 slides)

**03 - Managers Role in Effective Maintenance** – The objectives that mining managers assign departments are critical in guiding the essential interaction of departments in support of the operations production strategy. Keen oversight of these interactions can impact the success of that strategy. (13 slides)

**04 - Applying Maintenance Principles** – There are numerous basic principles that successful maintenance must follow. Adherence to these principles contributes significantly to effective maintenance and, critical support of the operations production strategy. (19 slides)

**05 - Implementing the Maintenance Management Program** – Many maintenance organizations struggle to produce a program that effectively explains how work is requested, identified, classified, planned, scheduled, assigned, controlled, measured and its success evaluated. The quality and clarity of that program ensures that internal maintenance activities are efficiently carried out, while other mining departments supporting and cooperating with maintenance do it effectively. (93 slides)

**06 - Applying ISO 55000 Standards** – Learn how universal international standards are applied to define, develop, implement, and utilize a quality maintenance management program. (25 slides)

**07 - Selecting and Implementing Maintenance Organizations** – Numerous types of organizations are available to maintenance. Organizational capabilities are illustrated and evaluated to guide in selecting the best organization for each maintenance objective. (36 slides)

**08 - Duties of Key Maintenance Personnel** – By establishing and illustrating the specific duties of key maintenance personnel, they can be utilized most efficiently. Observe typical job descriptions and learn how to manage organizational change. (18 slides)

**09 - Determining Workforce Size and Craft Composition** – Learn how to determine the correct maintenance workforce size and its craft composition. (31 slides)

**10- Implementing Effective Preventive Maintenance** – Learn how to implement an effective ‘detection-oriented’ preventive maintenance program. Observe its impact on avoiding the premature equipment failure and its ability to ensure maximum planned work. (53 slides)

**11 - Utilizing Condition-monitoring Technologies** – Observe how PM effectiveness is enhanced by the addition and utilization of condition-monitoring technologies and diagnostic tools. (50 slides)

**12 - Implementing Reliability Centered Maintenance** - Learn how to achieve maximum equipment reliability and extend life at the least cost with this invaluable strategy. (84 slides)

**13 - Maintenance Planning Essentials** – Master the essential, proven planning techniques to yield productive labor utilization, ensure quality work and extend equipment life-span. (36 slides)

**14 – Conducting Maintenance Scheduling** – Learn how to conduct operations and maintenance scheduling meetings effectively, assure constructive participation and conduct daily coordination meetings to ensure accurate knowledge of on-going work status. (19 slides)

**15 - Implementation and Utilization of Information Systems –** Learn how to determine the most effective information system, implement it and utilize it efficiently. Determine required maintenance actions dictated by information provided. (53 slides)

**16 - The Essential Maintenance Management Information –** Identify essential maintenance management information, ensure its accuracy, and determine who should receive it and what actions are required to control and manage maintenance. (55 slides)

**17 - Establishing Effective Cost Control -** Examine the factors that influence cost control and learn how to apply them. (42 slides)

**18 - Making Equipment Replacement Decisions** - Learn how to apply the cost and performance factors that guide equipment replacement decisions. (22 slides)

**19 - Measuring and Improving Worker Productivity -** Learn how to measure productivity, identify and correct work control problems to improve labor utilization. (34 slides)

**20 - Conducting Benchmarking Surveys -** Learn how to conduct effective benchmarking surveys and apply best practices to improve organizational performance. (20 slides)

**21 - Managing Projects and Shutdowns –** Learn how to manage non-maintenance work like construction. Be able to balance the maintenance workload against the demand for capital work. Establish criteria for selection of the right contractors to support or conduct maintenance and capital work. (33 slides)

**22 - Improving Maintenance Performance –** Learn how to conduct evaluations that can identify improvement needs, establish their priorities, and formulate an action plan to monitor progress and verify accomplishments. (50 slides)

***Consulting Strategy - The ultimate success of all consulting projects related directly to the intentional involvement of mine and plant managers. Each project began in a conference with these managers. As we outlined project objectives, the desired role of management was proposed and management appreciation of the maintenance function assessed. We were always pleased with the outcome of these discussions and especially the management support we could expect. Managers not only promised support but, commented constructively on how they could deliver it.***

***We now possessed a solid commitment to project objectives, made official by the manager but more importantly accepted by the total workforce.***

***As projects got underway, periodic discussions reported progress, received recommendations, and applied them while actively publicizing the project. Every bulletin board, gathering spot and assembly area was plastered with illustrations, schematics, and explanations of the project.***

***We countered the occasional suspicion, typical among many workforces, that some new ‘hare-brained’ scheme was being hatched behind closed doors and about to be inflicted on an unsuspecting workforce. To counter this, we deliberately opened all discussions often including maintenance craftsmen, warehouse personnel and equipment operators. Surprisingly, their recommendations were effective and their inquiries thought-provoking, “How are we supposed to do that?”***

***A footnote to my consulting activities kept me busy well beyond my intended retirement date. A well received, and highly successful consulting technique combined on-site evaluations identifying essential problems with follow-up seminars to correct problems identified by the evaluations. The seminars were primarily directed at maintenance but also combined groups: Maintenance with operations or, maintenance with purchasing and warehousing. The series of seminars concluded with management attendance. Attendees were asked: “What did you learn and how are you going to apply it?” Here again our deliberate involvement of management created dividends as numerous practical recommendations emerged.***

*To discuss or obtain the course contact Paul D. Tomlingson at* [*pdtmtc@msn.com*](mailto:pdtmtc@msn.com)*.*

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