

Overview

Worldwide, organizations are focusing on producing products and processes using principles of total quality management (TQM). In the last 20 years, some form of TQM has been used in every type of organization, both public and private.

The hot mix asphalt industry, while getting a late start in quality management, is actively working to embrace the concepts in order to improve its product. However, the process for building an HMA pavement is not simple. There are many phases involved and many different activities that constitute the process of constructing a high-performance, quality HMA pavement.

The nomenclature of this quest for quality pavement varies. Some organizations call the process quality management, others call it quality control/quality assurance, and still others call it field management. Depending on the author, the reader may encounter any or all of these terms, all of which describe the control of the HMA manufacturing and placement processes.

Quality management of HMA ensures high performance in HMA pavements. Central elements of the quality management process are:

- The contractor must be responsible for the manufacturing process. Responsibility for process control is crucial.
- All elements of pavement construction must be considered as one activity. Mix design, structural design, and construction must be inextricably linked to ensure the overall process results in high-performance pavements.
- Process control must ensure the design and construction of high-performance pavements rather than checking for poor quality: building it right rather than inspecting to see if it's wrong, in other words.
- Cooperation and communication between all stakeholders in the process is critical.

Symposium Purpose

This symposium was organized to provide a forum to highlight practical implementation of several approaches to achieving quality in HMA pavements. While the central themes previously noted will be echoed throughout many of the papers, vastly different approaches are taken by different organizations to address quality management.

Some of the papers present broad concepts on development of quality management systems in organizations, while other papers present specific technical information on operation of quality management programs. Thus, the reader can get both broad and specific information on quality management in this special technical publication.

Summary

Improving the performance of hot mix asphalt is an ongoing goal for the pavement industry. Advances in mix design, structural design, and construction may provide tools to

assist the industry. However, if the manufacturing process is not appropriately controlled with some type of quality management system, the best equipment and materials can be sacrificed. Embracing quality management concepts and philosophies is crucial to the manufacture and placement of high-performance hot mix asphalt.

This special technical publication contains information that will provide the reader with an understanding of how quality management systems can, and do, function in real world applications.

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