

T2ASCO, LLC

technical training & advisory services company
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New 2009 / 2010 Training Season Features

- “Equipment Management” Full Day Program Option**
- Foam Mix “Warm Mix” Presentation**
- Energy Management Presentation**
- 3 Ring Resource Binders on all Full Day Programs**

HMA Production Training & Seminar Programs

TJ Young and T²ASCO is pleased to offer the following programs and seminar topics for personnel training and annual meetings.

For employee development and regular annual training programs, note that three new one day programs are offered, each with its own focus. They represent three different levels of knowledge in hot mix production:

1. An understanding of the **“Principles”** of production, or how asphalt plants are designed to work,
2. A focus on the **“Best Practices”** of production, or how to properly operate the plant to make consistent, high quality mix, in today’s world, and
3. A review of **“Equipment Management”** topics for production facilities, because hot mix plants have unique requirements that are not shared with other types of construction equipment.

To construct a customized training program or to select content for an annual meeting, you can also select topics from the Advanced Programs & Executive Seminars starting on Page 3.

Principles of Hot Mix Production

1 Day

This course is designed for people who need base-line knowledge of Hot Mix Production, but experienced hands will also find useful information presented here. This program explains how a hot mix plant works, and discusses principles of operation for each part of the plant process.

Content areas include:

- Aggregate Proportioning from Cold Feed Bins
- Burner and Dryer Principles
- Dust Collection and Fines Return
- Asphalt Metering
- Principles of Drum Mix Operations
- Principles of Batch Plant Operations
- Finish Product Storage Silos and Load-Out Principles

A 200 page, 8 section **“Principles of Hot Mix Production”** binder is handout material for this program.

Best Practices in Hot Mix Production**1 Day**

This course is designed for console operators, foremen, production managers, quality control personnel, and inspection personnel. These are the practices used by producers to make consistent, high quality mixes in today's world and to consistently achieve "bonus" results. This is not an introduction course. Attendees must have an understanding of how plants operate before attending this program. *(See note below on delivery option.)*

Content areas include:

- Best Practices for Cold Feed Blending
- Best Practices for Asphalt Storage and Asphalt Metering
- Best Practices for Aggregate Drying
- Best Practices for Dust Collection & Fines Return
- Best Practices for Recycle Mix Production
- Best Practices for Drum-Mix Blending
- Best Practices for Finish Product Storage & Load-Out
- Best Practices for Batch Plant Blending

A 100 page, 10 section "*Best Practices in Hot Mix Production*" binder complete with a Trouble Shooting Guide and Best Practices Poster are handout materials for this program.

(Through extensive experience delivering this program, it has been discovered that if attendees are not thoroughly knowledgeable about the details of plant calibration and operation, it is best to add another ½ day to the time frame of the course so that plant processes can be explained while explaining operational best practices. This can be accomplished by setting aside two days and starting the program mid-morning the first day to allow for drive-in time and adjourning the program mid-afternoon the second day to allow for return travel time.)

Equipment Management in Hot Mix Production**1 Day**

This course is designed for those responsible for maintaining a hot mix plant. This program covers the unique setup and mechanical maintenance requirements of hot mix facilities. There are unique mechanical skill sets that apply ONLY to hot mix plants, such as adjusting trunnions, maintaining baghouses, aligning and calibrating belt scales, adjusting slat conveyor chains, adjusting flights, etc. These are the subject areas for this program.

Content areas include:

- Flighting Adjustment for Dryers
- Trunnion Adjustment for Dryers
- Baghouse Maintenance
- Testing Static Pressure
- Belt Scale Alignment
- Belt Scale Calibration
- Asphalt Meter Calibration
- Chain Adjustment & Replacement

A multiple section, illustrated binder is handout material for this program.

Advanced Programs & Executive Seminar Topics**1 ½ - 2 Hours Each**

The following topical areas are excellent for understanding plant operations in deeper detail, constructing a custom training program, or for creating content for convention audiences.

Each of these topics can be compressed into 1 ½ hour presentations, but 2 hours is a comfortable time frame to adequately cover the material and field questions from the group.

You will notice that many of these topics are sub-sets of the content of the three one day core programs. Carefully select your agenda for customized training so you don't overlap material if you also plan on using one of the full day programs.

Energy Efficiency in Hot Mix Production

Energy costs have risen sharply the last few years, and energy consumption is huge portion of the cost associated with producing a ton of hot mix. This program gives you the tools to "score card" your plant for energy efficiency, identify opportunities for energy improvement, and provides practical "rules of thumb" to use in evaluating and calculating payback on the investment in insulation, flight changes, frequency drives, and other energy saving equipment.

Contractor's Experiences with "Foamed" WMA Mixes

WMA or Warm Asphalt Mixes are gaining in popularity. Some states are now allowing Warm Mixes to replace Hot Mixes at the contractor's election. In the United States a water injection "foamed asphalt" approach is gaining foothold in lieu of additive style alternatives. This presentation reviews contractors experiences with the different "foamed asphalt" WMA approaches available and addresses issues that relate to equipment differences, plant convertibility, energy savings, field workability, and acceptance by the "retail" customer market.

20 Common Production Mistakes

A discussion of the 20 most common production errors that lead to defective mix production is the focus of this session. The purpose of this program is not be negative, but is to serve as a "wake up call" that your operation, too, can make these common errors. The first step to avoiding these common mistakes is to identify them. Note that the material in this program is a sub-set of the material presented in "*Best Practices in Hot Mix Production*" with the most common Best Practice errors repeatedly seen in the field covered.

Score-Carding Your Plant for Production Efficiency

This program is geared for top management and key operational managers and outlines Key Performance Indicators for "score-carding" your plant production and operational efficiency. This program introduces you to material resources you can use to answer the following questions and then implement changes inside your organization.

- Is my plant capable of producing the maximum tph it is designed for? (continued...)

- Are my plant's drying costs reasonable for my local aggregates?
- Are my plant's other energy related costs reasonable?
- Am I capable of using the highest percentage RAP in my plant for my market?
- Do my operational practices conform to "Best Practice" standards?
- Do my maintenance practices conform to "Best Practice" standards?
- How do I keep track of "Key Performance Indicators"?

Maximizing RAP in Hot Mix Production

Using RAP in mix production has become a "must do" to compete in today's market. This program covers Best Practices for reclaiming, processing, fractionating, stockpiling, and using RAP efficiently at the plant for top quality mix production. The differences in heat transfer techniques and equipment configurations for parallel-flow and counter-flow drum-mixers are discussed. The different recycling techniques for introducing RAP into a batch plant are discussed. Practical equipment choices and useful field practices is the focus of this program.

Managing Baghouse Fines Return for Effective Voids Control

Best Operating Practices for consistent fines collection and consistent fines return is the focus of this session. This is not an equipment maintenance program. For that select "Baghouse Operation and Maintenance". This program focuses on operational issues that relate to quality production when using a baghouse to collect and return fines to the mix. Equipment choices for partial fines return is also covered in depth. This session can be combined with "Baghouse Operation and Maintenance" to thoroughly cover all aspects of using a baghouse in mix production.

Baghouse Operation and Maintenance

This program explains how baghouses work, how to operate them during mix production, what needs to be monitored on a regular basis for effective operation, and what maintenance is required to keep them functioning properly. This is not a "theory" course. This is a detailed look at the baghouse as equipment in the production process. Reverse Air, Pulse Jet, and Reverse Atmosphere type collectors are all covered. A discussion of the different types of felt and filter media is also covered, along with media choice guidelines. This is an equipment focus course. For a discussion of issues relating to baghouse fines collection and fines return select the program "Managing Baghouse Fines Return for Effective Voids Control". These two baghouse programs can be combined for a thorough review of all the aspects of baghouse use.

Silo Management in Hot Mix Production

This program is a detailed look at using hot mix storage silos in the production process. Equipment design, equipment options, equipment operation, proper load-out techniques and equipment maintenance topics are all covered. This program can be combined with "Selling Through Silos" to thoroughly cover all aspects of silo management.

Selling Through Silos

Planning mix production and selling through storage silos in metropolitan markets has unique challenges, particularly when enough silos don't exist for the multiple mixes that need to be run in the course of the day. The style of plant and number of silos impacts the way you manage your silos. How to plan production, manage this equipment, and manage your yard traffic is the focus of this session. Sales and "dispatch" personnel are often invited to participate in this program. This program can be combined with "Silo Management" to thoroughly cover the finished product storage silo aspect of the production process.

Drying Efficiency in Hot Mix Production

The dryer and air handling package on the hot mix plant as a combined unit are the key pieces that influence tph and overall operating costs. Producers, equipment managers, and foremen often ask themselves:

- How many tph is my plant capable of producing?
- Is my equipment properly sized?
- How much fuel should I be burning for my local conditions?
- How do I know if effective drying and heating is occurring?
- Are different styles of dryers more thermally efficient?

These are the topics that are addressed in this program. Attendees will learn how to "score-card", monitor, and manage their dryers more effectively.

Flighting Management and Flight Adjustment

The large stone and high RAP mixes that we now run in the industry typically require older dryers to be re-flighted for maximum efficiency. New plants also often need their flights adjusted to balance between the extremes of large stone and fine mixes, virgin mixes and RAP mixes. This program teaches attendees how to adjust their dryer flighting to balance between these extreme requirements and how to judge if their dryers are flighted for maximum efficiency.

Preventive (Scheduled) Maintenance for Hot Mix Plants

Repair is avoidable. Maintenance is not, and hot mix plants wear with each ton of mix they produce. This session outlines the practices of successful producers who operate without plant breakdown and teaches the structures and tools of a scheduled or preventative maintenance program. Inspection and lubrication forms that can be taken back and implemented immediately are part of this session.

Trunnion Adjustment for Aggregate Dryers

The lack of proper trunnion adjustment and tire management may be one of the plagues of our industry. 75% or more of the dryers in the field have improperly adjusted trunnions. This program teaches the "science" and the "art" of trunnion adjustment, dispels some of the "myths" on the street, takes the "fear" out of the activity, and helps ensure that dryer assets are properly managed to avoid premature failure and replacement.

Testing Static Pressure

Measuring static pressure is an important diagnostic tool for properly managing baghouse operations and air flow through the plant system. It is a valuable diagnostic tool when things are not working properly. This session teaches how to measure static pressure and how to use it as a diagnostic tool for correcting production rate problems.

Belt Scale Alignment & Belt Scale Calibration

Belt scales are an integral part of modern hot mix plants. Inaccurate belt scales will result in mix quality problems, or at least reduction in bonus pay opportunities. This session covers the proper generic procedures for belt alignment, scale alignment, and scale calibration that apply to all brands of plants.

Asphalt Meter Calibration

Asphalt meters are a critical component for drum-mixer success. Asphalt is the primary pay factor in mix production and is arguably the key ingredient that affects voids in the mix and field compactability. Having your meter perform as accurately as possible is a critical requirement for successful drum-mix production, especially in today's bonus driven environment. This session reviews the different styles of meters and their generic calibration techniques.