



Troubleshooting Plant Operations
Part 1: Gradation (including Baghouse Fines)

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❖ **Lecture Details**

- *Even in the best of companies, plant operations sometimes have difficulties. This is the first of three sessions on troubleshooting plant operations. This first session deals with troubleshooting gradation and baghouse fines issues. This session will focus exclusively on drum mix plants.*
- *Identify possible causes of gradation inconsistencies.*
- *Develop ideas for possible solutions to the problem*
- *Implement solutions to get production back onto a quality track*

❖ **Gradation is volumetrically controlled at the cold feed bins**

❖ **The plant is just a blender.**

- **Mix the agg.**
- **Mix the AC**

❖ **Cold feed gates have max and min speeds. Got a gradation problem? Check to make sure gates are not running at their min/max speeds.**

❖ **Proactively check gradations of stockpiles. Check often because rock changes.**

❖ **Proactively check plant calibrations on your own, whether being told to or not. It will save you time and money.**

❖ **Gradations wrong? Check if:**

- **Stockpile gradations have changed**
- **Plant is malfunctioning**
- **Segregation in the mix**

❖ **Comparing gradations is key!**

- **Extracted Gradations, from HMA**
- **Combined Gradations, from cold feed going to dryer**
- **Individual Gradations, from feed bins, stockpiles, etc.**

❖ **Complications**

- **Baghouse dust**
 - **100% dust return?**
 - **Wasted/Partial Return/ Silo Return**
 - **Dust return can be as long as 40 mins before dust returns.**
 - **Changing tons/hr, your test results are affected.**
 - ◆ **Voids will collapse/grow.**
 - ◆ **Small production rate changes = best practices**
 - **End days run at startup rate**
 - ◆ **Allows for correct dust amount on next startup day**
 - **Don't clean out baghouse at each day's end, only baghouse return, not screws.**
 - **With steep screws you can have start/stop issues with dust in and out of mix.**
 - **Don't test your dust only at startup. You can run short if so.**