



**Industrial Kiln
& Dryer Group®**



Intro to Rotary Ball Mill Process and Operation 101

COURSE MISSION

DAY 1

DAY 2

DAY 3

AGENDA

The purpose of this class is to educate you on the fundamentals of ball mill theory (controlled decrease of material size). We will cover concepts related to comminution, material flow, ball flow, liners, diaphragms, critical speed, fill degree and more. Interactive labs with hands-on experience will help further reinforce the theories in class. This class is designed to answer your ball mill process questions and to help you logically create a plan of attack to fix on-going problems or prevent new issues.

PROFESSOR LINEUP:

Ricardo Telles, Ball Mill Design / Application Topic Expert

Tom Zhang, PhD, PE, Senior Process Engineer

Alejandro Terrazas, Application Field Service

Monday

5:45 PM – Meet in hotel lobby for dinner

Embassy Suites 9940 Corporate Campus Drive

6:00 – 8:00 PM – Dinner: Blind Squirrel - *592 N. English Station Road*

Tuesday

7:00 – 8:00 AM – Breakfast at hotel

8:00 – 8:30 AM – Travel to office

8:30 – 9:00 AM – Introduction & Terminology Review

9:00 – 12:00 PM – Lecture Part 1: What is Comminution, Relative Motion of Media and Balls, Cataract and Cascade Phenomena, Filling Degree, Ball Wear, Ball Distribution/Ball Equilibrium, Critical Speed, Effect of Liners on Balls

12:00 – 1:15 PM – Lunch

1:15 – 2:15 PM – Calculations: Critical Speed Calculation, Fill Degree Calculation

2:15 – 4:00 PM – Lecture Part 2: What is Comminution, Relative Motion of Media and Balls, Cataract and Cascade Phenomena, Filling Degree, Ball Wear, Ball Distribution/Ball Equilibrium, Critical Speed, Effect of Liners on Balls

4:00 – 4:30 PM – Wrap up

4:30 – 5:00 PM – Travel to hotel

5:30 – 6:00 PM - Meet in hotel lobby and travel for Fun Night

6:00 – 9:00PM – Fun Night: Flying Axes - *146 N. Clay Street* follow by dinner at
Doc Crow's 127 W. Main Street

Wednesday

7:00 – 8:00 AM – Breakfast at hotel

8:00 – 8:30 AM – Travel to office

8:30 AM – 12:00 PM – Lecture Part 1: Liners, Diaphragms/Stages, Material Quality/Fineness to reach compartment Grinding Charge, Inspection and/or What to Look For

12:00 – 1:15 PM – Lunch

1:15 – 2:15 PM – Calculations: Effect of Fill Degree to Ball Movement, Effect of Liner Wear to Ball Movement

2:15 – 3:45 PM – Lecture Part 2: Liners, Diaphragms/Stages, Material Quality/Fineness to reach compartment Grinding Charge, Inspection and/or What to Look For

3:45– 5:00 PM – Wrap Up

*Agenda is subject to change