



Refractory Manufacturing: Course Outline

This course is an introduction to the field of refractory manufacturing. It first addresses basic concepts from powder preparation to forming of refractories. Next, each major refractory composition is discussed in detail, from raw materials to final properties. Participants will be introduced to manufacturing fundamentals of all classes of refractories.

Who will benefit?

Engineers, managers, contractors, purchasing agents, furnace operators, maintenance supervisors, and technicians who are involved in the manufacturing, marketing, research and development, or consumption of refractory materials will find this course beneficial. A high level technical or engineering background is not essential to take this course, although technical professionals will find the subject matter informative and useful.

<u>Lecture Number</u>	<u>Topics / Activities During Class</u>
Lecture 1	Processing Philosophies
Lecture 2	Processing Overview
Lecture 3	Powder Preparation
Lecture 4	Rheology
Lecture 5	Particle Packing / Mixing
Lecture 6	Pressing
Lecture 7	Casting
Lecture 8	Extrusion
Lecture 9	Silica Refractories
Lecture 10	Alumina-Silica Refractories
Lecture 11	Alumina-Silica Refractories
Lecture 12	Basic Refractories
Lecture 13	Basic Refractories
Lecture 14	Zirconia Refractories



Lecture 15	Fused Cast Refractories
Lecture 16	Carbon Refractories
Lecture 17	Non-Oxide Refractories
Lecture 18	Composite Refractories
Lecture 19	Insulating Brick Refractories
Lecture 20	Insulating Fiber Refractories
Lecture 21	Castable Refractories
Lecture 22	Castable Refractories
Lecture 23	Gunning Refractories
Lecture 24	Plastic Refractories