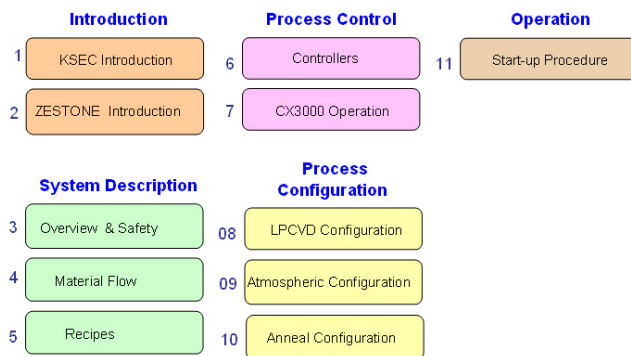


ZESTONE Z3B-Z5 Phase I Introduction and Fundamentals

Phase I provides the foundational information needed by any personnel working on Kokusai equipment. All other courses build on the knowledge developed in this class.

Phase I is a suggested prerequisite for all subsequent ZESTONE Z3B-Z5 classes.

Learning Environment



On-Line course materials are organized as a series of modules that can be studied one at a time as each student's schedule permits. **The lessons are self-paced so that each student can proceed according to their own level of background knowledge and experience.** A single lesson can be typically completed in an hour.

Course lessons are presented in a multimedia format including slides, voice narration by the instructor and animations to demonstrate robotic movements and operations.

After courses are satisfactorily completed, students may log in and review materials at a later time.

The courses are contained in a Learning Management System (LMS) that provides the structure and administration of all the elements required for on-line learning.

After students log on, they have access to many support resources including a library of resource materials, quiz results, course status and FAQ's. The LMS is a firm foundation for a continuing expansion of the Kokusai On-line course offerings.

	On-Line	Classroom
Course Number	31W1	
Duration		
Level	Introductory	
Suggested Pre-requisites	None	

Why You Should Take this Course

KSEC Training Services are competence building programs designed to enable you or your personnel to respond more productively to system and process challenges, reducing cost and downtime.

- Improved maintenance staff skills
- Faster service response
- Less down time
- Reinforcement of safety practices

Who Should Attend

- Process Managers/Engineers
- Maintenance Technicians
- Maintenance Supervisors

What You Will Learn

After completing this module, you should understand:

- How material flows through the furnace and the operation of the material handling robots
- The process cycle & recipe batch processing
- The process chamber gas supply and exhaust components and how they operate
- The CX3010 main user interface and use of the operation touch screens
- Startup & shutdown procedures
- The safety hazards and protective features associated with the ZESTONE Z3B-Z5 tool

Registration

Online course registration requests are available via our website www.ksec.com/training. After a registration request is received, we will coordinate all of the payment details on your behalf and send your online authorization via email. Then you may proceed to take the course at your own schedule within a 90 day period.

Course Topic Outline

OVERVIEW & SAFETY

- Process Chamber & Chamber Support Systems
- Material Handling System
- Electrical Distribution System
- Material Flow Through the VDF
- Operator Controls
- Batch Processing Concepts
- ZESTONE Process Configurations

CONTROLLERS

- Supervisory-Distributed Control Systems Hierarchy
- Control Network
- Supervisory Controllers
- Local Controllers
- Mechanical Controllers
- Interlock Units
- Chamber Control

CX3000 CONTROLLER

- Introduction
- System Status
- Alarm Status
- Command Buttons
- Function Control Buttons
- Main screen Area
- Mechanical Information
- Rack Information
- Gas Flow Control Block
- Temperature Control Block
- Pressure Control Block
- Recipe Control Block
- Heater Control Block

CONFIGURATION

- Vertical Diffusion Furnaces Orientation
- Wafer Process Flow
- Process Recipes

ANNEAL SYSTEMS

- 100% H2 Anneal Process Description
- 100% H2 Process Operation

ATMOSPHERIC SYSTEMS

- Wet Oxide Processes
- Dry Oxide Processes
- Atmospheric Process Chamber
- Exhaust Systems
- Steam Torch and Water Vapor Generators

LOAD-LOCK SYSTEMS

- Mechanical Configuration
- Pumpdown Sequence
- Exhaust System

LPCVD SYSTEMS

- LPCVD Deposition Process Description
- Process Chamber Operation
- Exhaust System Operation
- Vacuum Pumpdown operation

STARTUP & SHUTDOWN

- Startup Sequence & Procedures
- Shutdown Sequence & Procedures