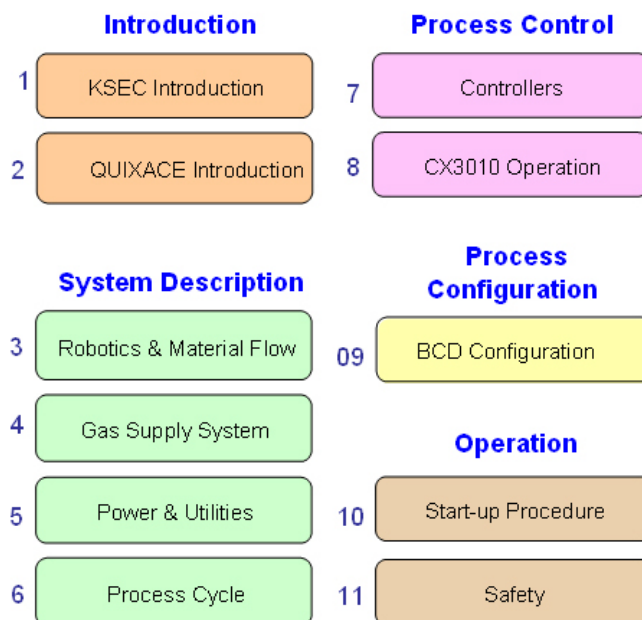


QUIXACE I / QUIXACE BCD Phase I Introduction and Fundamentals

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 QUIXACE I / BCD classes.

Learning Environment



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	32W1	
Duration	Self Paced	
Level	Introductory	
Suggested Pre-requisites	None	

Why You Should Take this Course

KSEC Training Services are competence and confidence 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
- Basic concepts of 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 QUIXACE 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

INTRODUCTION

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

ROBOTICS AND MATERIAL FLOW

- Material Flow
- Robotics & Mechanical Components
- RoBo5000
- Stage
- FOUPs
- IO Shutter
- Cassette Loader Robot
- Pod Openers
- Wafer Transfer Unit Robot
- Boat Elevator Robot
- Process Chamber Shutter

GAS SUPPLY

- Gas Supply Locations
- Integrated Gas System (IGS)
- CX3202 Gas Controller
- Mass Flow Controllers
- Automatic Valves
- Gas Control Signal Path
- Integrated Gas System
- Gas Piping Heaters
- Schumacher Bubbler

POWER AND UTILITIES

- Power and Power Distribution
- Power Box
- Power Main Breakers
- High Power Distribution
- Low Power Distribution
- Power Contactors
- N2 Purge System

PROCESS CYCLE

- Process Variables & Controls
- Gas Flow Control & Recipes

STARTUP & SHUTDOWN

- Startup Sequence & Procedures
- Shutdown Sequence & Procedures

CX3010 CONTROLLERS

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

CX3010 OPERATION

- Introduction
- System Status Display
- Recipe Information
- Operating Status
- Operating Modes Alarm Status Display
- Command & Control Buttons
- Function Buttons
- Temperature Screen
- Pressure Screen
- AUX I/O Screen
- Gas Pattern Panel Operation
- Other Monitor Buttons

BCD SYSTEMS

- Deposition Process
- Process Chamber
- Gas Flow Path
- Exhaust System
- Vacuum Gauges
- Exhaust System Valves
- Atmospheric Switch
- Pumps
- CVD Pump-down Sequence
- CKD Valve AV71

QUIXACE SAFETY

- Mechanical Hazards
- Thermal Hazards
- Electric Shock Hazards
- Chemical Hazards
- Gas Box Hazards
- Process Chamber Hazards
- Cabinet Air Flow
- Differential Pressure Monitors
- EMO Switches