### CN434

# Low Voltage System Drive ACS800 Application in Oil & Gas and Case Study

### **Course Goal**

The goal of this course is to help students to understand LV drive application in metals and analysis the cause of failure.

### **Course Objectives**

Upon completion of this course, students will be able to:

- Understand low voltage system drive
- Select suitable drive based on load
- Understand communication between ACS800 with AC800M/AC80or ACS600 with AC80(depends on used)
- Build the idea of system drive maintenance management

### **Student Profile**

System drive engineer, system maintenance engineer, maintenance supervisor, maintenance manager.

### **Prerequisites and Recommendations**

The student should have basic knowledge of ACS600 or ACS800, and Oil & Gas process control.

### **Main Topics**

- Overview of manufacture characteristics in Oil & Gas
- Overview of automation in Oil & Gas
- ACS800 basic functions and application in Oil & Gas
- The drives' parameters adjustment in Oil & Gas
- The configuration of system drive (Transformers, Breaker, Drives...)
- The principle to select system drive devices
- The case study and analysis the cause of failure (system related, communication related, technology related, etc.)
- Drive systematic maintenance and management.

### **Course Type**

This is an instructor led course with interactive classroom discussions and associated lab exercises.

### **Course Duration**

The duration is 5 days

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### CN464 Programming AC800M with Drives in Oil & Gas

### **Course Goal**

The goal of this course is to teach the students Programming controller AC800M with Drives in the Oil & Gas.

### **Course Objectives**

Upon completion of this course, students will be able to:

- Understand the construction and components of controller AC800M
- Explore and Create objects and aspects
- Configure AC800M hardware and I/O
- IEC 61131-3 programming language
- Set up OPC connection
- Understand Drive application program
- Backup and restore.

### **Student Profile**

System engineer, system maintenance engineer, System control engineer

### **Prerequisites and Recommendations**

The student shall to have basic knowledge of using PC

### **Main Topics**

- Overview of control system 800xA
- AC800M hardware and I/O
- Software and programming language
- Project structure
- Control Builder and Process Portal
- Programs
- Control Modules
- OPC Connectivity
- Drives application program and communication
- Operator interface
- Backup and restore

### **Course Type**

This is an instructor led course with interactive classroom discussions and associated lab exercises.

### **Course Duration**

The duration is 5 days

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## CN471 System MV Drive ACS1000 Application and Case Study

### **Course goal**

The goal of this course is to help students to understand process control and the drive units application and analysis the cause of failure.

### Learning objectives

Upon completion of this course the participants will be able to:

- Understand the function of process and drive control
- Understand system MV drives application in chemical and etc. industries
- Build the idea of system MV drive maintenance management
- Understand the method of system MV drive maintenance

### **Participant profile**

System drive engineer, system maintenance engineer, maintenance supervisor, maintenance manager.

### **Prerequisites**

The student should have basic control and MV drives and control knowledge

### **Topics**

- Medium voltage safety requirement
- Function between process control and drive units
- MV Drive ACS1000 application in chemical and etc. industries
- The configuration of system MV drive (Transformers, Breaker, MV Drives...)
- Control section and communication with MV Drive ACS1000
- The case study and analysis the cause of failure (system related, communication related, technology related, etc.)
- MV Drive systematic maintenance and management.

### **Course type and methods**

This is an instructor led course with interactive classroom discussions and associated lab exercises.

### Duration

The duration is 5 days

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## CN479 System MV Drive ACS6000 Application in Chemical and Case Study

### **Course goal**

The goal of this course is to help students to understand process control and the drive units ACS6000 application and analysis the cause of failure.

### Learning objectives

Upon completion of this course the participants will be able to:

- Understand the function of process and drive control
- Understand system MV drives application in chemical and etc. industries
- Build the idea of system MV drive maintenance management
- Understand the method of system MV drive maintenance

### **Participant profile**

System drive engineer, system maintenance engineer, maintenance supervisor, maintenance manager.

### **Prerequisites**

The student should have basic control and MV drives and control knowledge

### Topics

- Medium voltage safety requirement
- Function between process control and drive units
- MV Drive ACS6000 application in chemical and etc. industries
- The configuration of system MV drive (Transformers, Breaker, MV Drives...)
- Control section and communication with MV Drive ACS6000
- The case study and analysis the cause of failure (system related, communication related, technology related, etc.)
- MV Drive systematic maintenance and management.

### **Course type and methods**

This is an instructor led course with interactive classroom discussions and associated lab exercises.

### **Duration**

The duration is 5 days

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