

## **E** Engineering Services

Contech offers integrated control services including control systems integration, programming and instrument engineering along with a full spectrum of electrical engineering capabilities. Contech offers specialized control system, instrument and electrical engineering services for the chemical and petroleum-processing industries as described below:

## **Control System Engineering**

Instrumented Systems (SIS) and Programma- ing services and more: ble Logic Controllers (PLC). We are hardware independent and have knowledge on many different systems. We are capable of complet
Low and Medium Voltage Substation Design ing your automation project by providing the services listed below:

- DCS System Specifications
- PLC System Specifications
- DCS System Staging and Integration
- PLC System Staging and Integration
- DCS System Programming and Testing
- PLC System Programming and Testing
- Human Machine Interface Development
- Control Graphics Development
- Shutdown Systems
- Alarm and Alarm Management Systems
- · Logic and Interlock Systems
- Burner Management Systems
- Machinery Monitoring and Control Systems Induction and Synchronous Motor Applications
- Vibration and Proximity Monitoring Systems Variable Speed Drive Applications
- Compressor Control Systems
- Batch Control Systems
- Multivariable Control Systems
- Data Aguisition Systems
- Control Improvement Studies
- Operating Procedures
- Startup/Shutdown Plans and Procedures
- 'Hot Cutover' Plans and Procedures
- Factory Acceptance Testing
- Site Acceptance Testing

## **Electrical Engineering**

Contech is skilled in completing systems work Contech can provide many electrical services to on Distributed Control Systems (DCS), Safety your Gulf Coast facility. We provide the follow-

- Area Classification Drawings

- Power Distribution System Analysis
- Fault Current Studies
- Protective Device Coordination
- Load Studies
- Power Factor Studies
- Motor Starting and Re-acceleration
- Switchgear
- · Power Transformers
- Electrical Metering
- Capacitor Banks
- Motor and Motor Control Centers
- Motor Control Schematics
- · Cable Tray Design
- Underground Duct Banks

- Resistance Heat Tracing
- Inductive Heat Tracing
- Grounding Systems
- UPS Systems
- Junction Boxes, Terminations and Grounding
- Conduit Plans and Details
- Cabling and Wiring Systems
- Lighting and Surge Protection
- Intrinsic Safety Systems
- Fiber Optic Systems
- Communication Systems
- Security Systems
- Electrical Design for Hazardous Locations
- Purging for Reduction of NEC Area Classification

## **Instrument Engineering**

Contech is competent in designing and specifying your plant instrumentation system. We can provide all of the drawings and documentation to complete your instrumentation projects. Some of these items are as follows:

- Field Instrument and Control Room Surveys
- P&I Diagrams Preparation (AutoCAD and Intergraph)
- Instrument List Preparation
- Instrument Specification Sheets
- Instrument Installation Details
- Flow Applications and Design
- Pressure Applications and Design
- Temperature Applications and Design
- Level Measurement Applications and Design
- Control Valve Application and Specification
- Relief Valve Sizing and Specification
- Critical Instrument Testing Programs
- Instrument Air Compression Systems
- Drying Systems
- Distribution Systems



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