

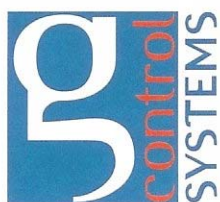
The company is split into two divisions Glanford Instrument Services Ltd being established in September of 1988 to provide engineering, design and draughting services to industry in electrical and instrumentation. To fully service our clients needs it was decided to form a new company Glanford Control Systems Ltd to fill the gap on the DCS/SCADA/PLC programming front.

The company is made up of teams of Project Engineers Programmers and Designers who are capable of implementing a full range of engineering solutions from single loop control to the installation and programming of state of the art distributed control systems.

Our personnel are capable of full project and fiscal management and can oversee the installation of equipment to full on site commissioning. We can provide both on and off site design/programming for both instrument and electrical systems. Documentation and full training on the completed systems is also available from professionally qualified experts, for technical staff and end-users at all levels.



- Petrochemical
- Pharmaceutical
- Refinery
- Water
- Steel
- Food
- Automotive
- Fire & Gas Systems
- Safety Shutdown Systems
- TV/Satellite Control & Communications
- DCS / SCADA / PLC
- Fieldbus & Multiplexed Systems
- On & Off Shore
- UK & Worldwide



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## Process Automation Experts

We are proud of our reputation for putting the client first in every area of our operations, and giving them what they asked for. We feel that this attitude is one of the most important contributors to our success and to the success of the clients we serve.



INVESTOR IN PEOPLE

REGISTERED FIRM



## COMPANY PROFILE

- System Integrators
- Project Management Capabilities
- Full Design and Build Capabilities
- Hazardous Area System Design Specialist's
- Fieldbus Systems Specialist's: Hart, Devicenet, Controlnet, Modbus, Profibus, Foundation and Lonworks (Echelon), ASI
- Digital / Analogue Communications Systems: LAN, WAN, ISDN, ADSL, WIFI, GSM, Satellite, Line of Site and Radio Telemetry Systems
- RTU Remote data logging Systems using PSTN, GSM, Radio networks
- Motor Control Centre - Specification, Design and Build of Customised Systems
- PLC Software and Hardware Specification, System Design, Programming, Installation and Commissioning
- ABB Controllers, Allan Bradley SLC500 PLC5, Modicon, Omron, GE Fenuc, Siemens Step 7, Mitsubishi Melsec and Taylor Mod30 Systems
- DCS Software and Hardware Specification, System Design, Programming, Installation and Commissioning:
- ABB Sattline, ABB IT, ABB Freelance, Rosemount System 3 and Honeywell TDC 3000
- SCADA / HMI Software and Hardware Specification, System Design, Programming, Installation and Commissioning
- Fix Intellution, Rockwell Wintelligent, Intouch Wonderware, Paradigm Edict, Citect, Siemens PRO Tools and AB Panelbuilder
- Customised Training to suit Clients Requirements
- Over 80 years experience of Mechanical / Electronic / Electrical & Software Control Systems



## **PROJECTS**

The primary responsibilities of the Projects Department of GIS/GCS Ltd. are to co-ordinate and manage the multi-discipline projects undertaken by the company.

GIS/GCS can provide experienced Project Managers and Engineers to perform any or all of the following Project Management functions:

- Client Liaison
- Conceptual and Feasibility Studies
- Estimating and Tender Preparation
- Preparation and/or Review of Technical Specifications
- Tender Evaluation
- Contract Negotiation and Review
- Purchase Requisitioning and Procurement
- Design, Procurement and Construction Programming
- Project Control, Procedures and Reporting
- Resource Scheduling Cost Control
- Expediting and Inspection Site Management
- Construction Management and Support · Stores Administration/ Material Control
- Compilation of Operation Manuals and QA Documentation

Effective overall project control is essential in today's business environment. GIS/GCS project personnel are able to provide experience, expertise and support to a wide range of projects from minor assignments to multi-million pound complete plant installations.

In addition, the Department is also able to provide Project Management, Project Engineering or Site Management services to Clients who undertake their own discipline engineering or require assistance in controlling the interface management and co-ordination of several contractors and sub-contractors.

Effective project control is essential if the agreed program and budget limits are to be maintained, particularly with regard to the management and valuation of design and scope changes. To this end the Department uses a variety of computer aided planning, project control and reporting methods using both proprietary and in-house developed software.

GIS/GCS Project Managers and Engineers have a diverse range of engineering backgrounds and we can therefore provide key personnel with experience of project managing and project engineering capital projects in the following industry sectors:

- Pharmaceutical Plants
- Petrochemical Plants
- Offshore Engineering
- Mechanical and Material Handling Plants
- Specialist Equipment Manufacturing
- Oil and Gas Refineries
- Food
- Water / Utilities
- Iron and Steel



## **PROJECTS**

Some of our Projects Accomplished:

- Automation of Deodorising Refinery Processes
- Roaster Scrubbing System
- Automation of Tanker Loading Systems
- Upgrade and Automation of Liquor Presses
- Upgrade and Automation of Grinding Ballmills
- Automation of SCBA Grinding Mill
- Pneumatic Conveying Systems
- Batching Systems
- Logistical Product Quality Tracking Systems
- Valve Sack Packer Filling System
- Weighing Systems
- Automatic Powder Silo Filling
- Automatic Powder Discharge Systems
- Automatic Palletising and Bagging Systems
- Automation of Bulk Bag Bagging System
- Intranet Plant Production Data Aquisitioning Systems
- CAT2/3/4 Plant Safety Shutdown Systems
- Process Control of Plant Refrigeration systems
- Production Office Intranet Data reporting systems
- Lighting and Emergency Lighting Systems



The Control Department of Glanford Control Systems LTD provides functional design specifications (FDS). Control and sequence programming for PLC / SCADA / DCS Software. full IT systems network and communication systems including HTML ASP SQL programming, installation, supervision and commissioning services to our customers for both modifications, and additions to existing installations and Green Field Projects.

Our programmers use tools and designs from the IEC 1131 Standards.

This consists of: · Part 1 General Overview · Part 2 Hardware · Part 3 Programming Languages · Part 4 User Guidelines · Part 5 Communication

We produce documents either with our own heading and formats, or in the customer's formats in AutoCAD, Access, Excel, Lotus 123, PLC ladder Software and proprietary control system software

The following are a list of documents and functions that are produced by the Controls Dept:

- Cause and Effects charts
- Programme functional descriptions
- Network connection & functionality
- Software Memory maps
- Pseudo code
- Software programming
- Functional block diagrams
- Sequential function charts
- SCADA / HMI mimic pages
- Alarm mimics and listings
- Trip and alarm System design, Schedules, Test procedures
- PLC system design
- SCADA system design
- DCS system design
- Function Design Specifications FDS
- Input/Output Schedules
- Configuration
- Program Validation Test/ Acceptance Documentation / Factory Acceptance Testing
- Test and Commissioning Documentation
- Manuals and Operating Instructions
- As-built docs and Manuals



## **INSTRUMENTS**

The Instrument Department of Glanford Instrument Services Ltd provides design, procurement services, calibration, installation, supervision and commissioning services to our customers For both modifications / additions to existing installations, and full green field projects. Using both Ex ia /d and non Ex applications.

We specialise in all types of Instrumentation ranging from Basic 4-20ma Analogue ccts to Analytical measuring devices using the latest Digital and Fieldbus Technologies including: ASI, Controlnet, Devicenet, Hart, Lonworks, Profibus, Foundation.

Instrument Specialists in:

- Pressure - Static, Differential, Absolute and Gauge.
- Temperature - PT100 RTD, Thermocouple Type J, K, L.
- Flow - Electro magnetic, Vortex, Coriolis, Thermal, Rotational blade.
- Level - Conductivity, Resonance, Hydrostatic (pressure), Ultrasonic, Radar, Rotating Paddle.
- Weight- Cells, Transceivers, A to D, Vessel, Batching, Checkweighing.
- Analytical - pH and redox, Turbidity, Dew point (Td) and relative Humidity (%RH)
- Pneumatics - Solenoid Valves, Control valves , Robotics

The following are a list of documents and functions that are produced by this Department

- P&ID Diagrams
- Instrument Index/Summaries
- Instrument Specifications
- Instrument Data Sheets
- Instrument Loop Diagrams
- IS Calculations etc
- Process Hook-ups
- Pneumatic Hook-ups
- Wiring/Connection Diagrams
- Instrument Location Drawings
- Test Procedures
- Functional Design Specifications Input/Output Schedules
- Instrument Configuration
- Instrument Programming
- Instrument Calibration
- Factory Acceptance Testing
- Hazardous Area Documentation
- Commissioning Documentation Manuals and Operating Instructions



## **ELECTRICAL**

GIS Electrical Department has been built up over the last 15 years. Our Engineers work as members of multi- discipline project teams. The department is also able to implement stand alone electrical and control projects for clients from resources within the department. Approximately 50-60% of workload is on single discipline projects, the remainder being to multi-discipline projects within the company.

All Electrical designs are made to the requirements of the Latest edition of BS7671 and the relevant IEE recommendations and referenced standards there in. All our cable calculations are engineered with Amtech cable calculation software.

We produce documents either with our own heading and formats, or in the customer's formats in AutoCAD, Access, Excel, Lotus 123, Amtech, and most other media.

The following are a list of documents and functions that are produced by this Department:

- Stripping out sketches
- Power distribution system design Single line diagrams
- Area Classification
- Specifications for switchboards, Transformers, Motor Control Centres
- Purchase Orders
- Expediting and Inspection
- Cable Schedules
- Cable Block Diagrams
- Cable routing
- Termination Schedules Wiring/Connection Diagrams
- Control panel layout Drawings
- Control Construction Drawings
- Power distribution system design Single Line Diagrams
- Emergency Generation and UPS systems
- Motor control schematics and connection diagrams
- Building services Heating and Ventilation
- Lighting and Small Power Distribution
- Fire and Security Alarms
- Telephone and Data systems
- Earthing of Power systems, Static and Lightning protection
- Equipment location and Cable routing plans
- Cable size calculations Cable schedules
- Installation documentation
- Test/Acceptance Documentation
- Factory Acceptance Testing
- Installation scope of work
- Test and Commissioning Documentation
- As-built drawings and Manuals



## ICT

GCS offers ICT (Information Communication Technology) consultancy services, from higher level ICT strategy development through to Data reporting ICT projects.

Whatever level of expertise and support you need to help your business grow, we can provide you with professional, practical advice that you can be sure will deliver you an optimum solution at an optimum cost.

GCS can provide effective and coherent support of all IT activities. This includes not only management of the physical infrastructure (networks, servers, computer, etc) but also the services run on them, whether data, multimedia or voice. We also provide ancillary services, such as training services and specialist advice on IT.

We can provide Internet Web and Intranet Web sites that can provide an easy to navigate clear display of content that will enhance your online profile, and provide a fast return on investment. Careful planning will go into the web site's overall visual design, and rollout. To achieve the above we use the following development process:

- Initial Ideas
- Project Costings
- Web Mapping
- Production & Design
- User Test & Validation Editing
- Phase Final Review
- Go Live

Our areas of expertise include:

- IT & Telecommunications
- Getting Plant Info to Office environment
- Requirements analysis
- System specification
- IT & Telecom Project management
- Networking & Telecommunications
- ICT is properly integrated into your Operations
- Strategic reporting that depends on ICT
- Design and implement changes to your ICT infrastructure
- Evaluate and specify upgrades to your servers and equipment
- Recommend new software tools and methodologies
- Evaluate new technology developments in the context of your business objectives

We offer custom software development to clients, focusing on Internet enabled applications. In Most of our applications are Internet-enabled, i.e. they are accessed through a web browser. In addition to Internet technologies and standards, we have strong technical competence in relational databases and using SQL, XML in data and application structure modelling.

Languages supported:

VB, VBScript, Visual Studio, C++, Java, JavaScript, COBOL, Delphi

Internet technologies used:

HTML, VRML, CGI, ActiveX, SQL, ASP, GIF, DHTML, XML, PDF, CSS, Flash, Real Audio