



Our mission is to carry each project through every stage of its development, from Front End Engineering to commissioning. We commit to technical expertise, problem solving approach, attention to detail and focus on delivering the best customer service.

Instrumentation Engineering Capability

Instrument and Control Philosophy

- ◆ Defines the instrumentation control design and shutdown philosophy .
- ◆ Describes the main operator interface systems to be used and the strategy for the overall instrumentation process control

Integrated Control and Safety Systems Specification

- ◆ Defines the minimum requirements for engineering, manufacturing and delivery of an ICSS (PLC or DCS based).

Instrumentation Design & Installation Specification

- ◆ Covers the minimum requirements and to gives recommendations for the selection and specification of instruments used for measurement and control of process variables .

Instruments Specifications, Data-Sheets, Requisitions

- ◆ Primary design Instrumentation purchase document, it details all the technical and process data required to select an instrument.

Cable Tray Support Layout / Detail

- ◆ Details the tray layout, design of the tray and Material Take Off .

Loop Diagram

- ◆ Shows field device installation details including wiring and the junction box (if one is used) that connects the field device to the control system .

Junction Boxes location Layouts

Junction Boxes Wiring Diagram

Cable List

Instrumentation Single Line Diagram

- ◆ In the same model as an electrical SLD, this drawing shows on a single view all relevant information to locate simply an instrument (area, junction box, cable, marshaling panel, PCS panel)

Instrument Cable Routing layouts

Control Room Layout

Technical room / Shelter Layout

I/O Schedule

- ◆ Base documents around which configuration revolves, information contained within it should include tag number, whether it is an Intrinsically safe or Non I.S. loop, digital or analogue, range, units, critical or non critical loop, report input and alarming priority .

Control System Architecture Drawing

- ◆ Provides a graphical representation of key solution components, including computers, networks, control equipment and the interconnectivity of components.
- ◆ Also provides physical location, function, installed software and network type.

Functional Design Specification

- ◆ Outlines the requirements for the system, and some design details which defines how the control system will achieve the outlined requirement .

Process Shutdown / ESD Cause & Effect

- ◆ Used as the basis for the logic, the usual appearance of a Cause & Effect is to have the cause on the left hand side with the effect at the top with a 'X' matrix. .

Marshalling Panels/Cabinets Studies

- ◆ Marshalling Panels provide cross wiring functionality between field instruments and the control system. By having this type of interface, input and output issues can be quickly identified and maintenance personnel can perform routine functions in the field without jeopardizing the heart of the control system .

Technical Bid Evaluation

Material Take Off

- ◆ List of reference documents and their revision number, recapitulative sheets per equipment stating length, number, weight and any other characteristics needed for purchase orders .

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