

## TRI TECH Services

### Our Services

#### Designing

TRI TECH have expertise in designing of electrical system. TRI TECH design custom electrical system to exact requirement of Industries. Application specialists are available for technical and design assistance.

#### Manufacturing

Manufacturing of low voltage switchgear and Electrical accessories in TRI TECH processed under high quality control and measures. Observed by qualified experts to satisfy the customers needs according to their specifications.

#### Electrification & Instrumentation (Supply & Services)

TRI TECH have expertise in Electrification and instrumentation of industries and plants according to IEC standard and Client's specification.

We working in all power, power Generation Synchronizing & Load Sharing) and control system and infrastructure for electrical applications. We are working in all kind of instrumentation, supply and installation.

#### Installation & Commissioning

Industrial Electrification and Instrumentation Generators Synchronizing & Load Sharing

Automation of Power Generation Remote Networking of Generators.

includes;

Earthing System & Lightning Protection system.

Cable Tray Installation and Conduiting.

Electrical Equipment Installation.

Cable laying, Termination & Commissioning.

Internal Wiring

Fire Alarm System

Sound System

CCTV & Computer Networking System

Installations of all kind of Industrial and commercial electrical system at site is as easy as making a smile for an experience team. TRI TECH has assure best quality start from designing to installation.

TRI TECH is committed to serve the market in best possible way incredibly efficient costing managing and engineering techniques. Novelty in products and services in the style of TRI TECH

### Plant Services

#### General

Every industrial plant encounters several shutdowns during its lifetime, be it for scheduled maintenance, replacement of parts, modification or expansion. Whatever the reason, the overriding challenge is to adhere to the most stringent safety standards and keep downtime to a minimum. To achieve that goal, the whole of logistical processes – comprised of the lifting, transport, installation and removal of many components – plays an important and interdependent role. Many plants, however, were not designed with shutdown activities in mind. Adding to shutdown complexity is the fact that in such projects, multiple parties are generally working simultaneously at the same site. These realities call for new and comprehensive approaches that take into account not only the movement of the different components, but also the safe coordination of activities carried out by different subcontractors.

## Experience

Over many years, TRI TECH has built extensive expertise in the shutdown of oil and gas plants. This has resulted in a deep understanding of the necessity of engineering and logistical planning, as well as practical expertise in safe execution.

## Tools and Plant

we have tools & plants, Measuring Instruments in its capacities and auxiliary equipment that may be needed. Our task force is subject to stringent maintenance programs, ensuring reliability and safety at all times.

## Our Concept

all that equipment is useless, however, without a thorough approach centered on safe delivery and minimal downtime. TRI TECH engineers have developed a unique shutdown concept that is based on the pre-engineering of all Electrical Rotaries, statics Machines and Equipment's work. The TRI TECH concept also optimizes the planning and coordination of different maintenance activities performed by different parties on site. These results in greater cost-effectiveness, as the overall operation becomes more aerodynamic and equipment is better utilized. Our detailed approach has a positive and significant effect on total downtime in shutdown projects and the associated costs thereof.

## Process Instrumentation & Control

We are pleased to introduce TRI TECH as a complete solution provider for the instrumentation & automation of industrial process applications with our sister concern company Voltonic Solution (Pvt.) Ltd .

We working in the field of instrumentation & Automation with a reputable track record and earns a very good reputé among the customers. Automation plays an increasingly important role in the overall performance, efficiency and reliability of much industrial process. This is the understanding that drives our engineering team to design and develop custom engineered systems to meet the process requirements and expectations of the client.

Also we provide the industrial scale microcontroller based solutions and custom tailored PCB designs.

We believe in solutions and not just products. It is an approach that helps us to take our clients into confidence, analyze and assess their requirements from different angles and then integrate products to provide the solution which is required.

Our technically advanced team tackle even the most stringent in Instrumentation and Control applications with utmost professionalism .

We offer our extensive experience in Chemical, Fertilizer, Glass, Sugar, Cement, Textile, Metal, Paper & packaging, Power Plants, Food Industries & Dairies. Additionally we offer exceptional expertise in Business Development Strategies, as well as HVAC applications in commercial buildings.

- DCS – Modern Distributed Control System
- PLC – Programmable Logic Control
- MES - Manufacturing Execution System
- Variable Frequency Drives
- X-ray food inspection systems
- Energy dashboards
- Squirrel Cage Induction Motors
- Geared Motors
- LED Industrial Lighting Fixtures and Solutions

- Moisture Analyzers & Analytical Instruments
- Process Instrumentation & Control Valves

TRI TECH is your ultimate choice for “ONE SOURCE” for all of your industrial needs.

Voltonic Solution – Is a front-runner in the provision of Electrical, Instrumentation & Control Systems Integration, Migration and Design services to industries that include FMCG, Fertilizer, Sugar, Oil and Gas, Water/Wastewater, Irrigation, Mining as well as manufacturing and other private, local and federal entities. With a senior staff that boasts many years of combined experience.

Voltonic Solution has a unique mastery of both aging systems and modern automation.

We deals in a vast range of products from some of the best manufacturers like

Rockwell Automation – Allen Bradley, WEG,

Wesdom,

Sensortech,

KPM Analytics

As a global company, we have offices in Pakistan, Singapore & USA. Use the map to find out where we are, and to visit the website for your country or region:

<http://voltonic.net/contact/>

LV switchgear for infrastructure

System range

TRI TECH is a modular system range of power distribution boards designed specifically for infrastructures up to 6300 A.

Low Voltage products are optimized for safe and reliable power distribution.

It consists of:

\_Switching and protective devices,

\_The modular enclosure system,

\_The control panel complete with planning and calculation tools.

The system range integrates switching and protective devices, mounting and enclosure systems and control panel components into a coherent, cost-effective system. The Low voltage switchgear that have been manufacturing according to IEC 60439. Available from Form 1 to Form 4, the system can be designed to comply to any applicable installation standards and all relevant switchgear combinations to the respective protection type up to 6300 A.

Product features

Clear segregation into functional areas up to Form 4b Enclosures for combination- and separate mounting,

\_Enclosure protection IP31 or IP54

\_Main busbars at the top up to 4000 A

\_Main busbars at the rear bottom up to 7000A.

\_Mains system types TN-C, TN-C-S, TN-S, TT, IT

\_3 or 4 pole circuit-breakers

\_Cable or busbar trunking connection from top or bottom

Products

\_Incomer Feeders,

\_Outgoing Feeders

- \_Bus Coupler Panels,
- \_ATS/AMF Panels
- \_ Power & Lights Distribution boards
- \_ Generator Synchronizing & Load Sharing Panels
- \_Load takeoff panels.
- \_ Metering Panel

## Motor Control Centre

### System range

TRI TECH have a range of Motor Control Centre designed specifically for Industrials and commercial Sectors up to 415 KW Motors.

Motor Control Centre products are optimized for safe, reliable and fully protected for Motors.

It consists of:

- \_Switching and protective devices.
- \_Modular enclosure system.
- \_the control panel complete with planning and calculation tools with easy access for maintain.

The system range integrates switching and protective devices, Such as MCCB, MPCB, Magnetic Contactors, Overload Protection Relay, Electronic Over Current Relays, Thermistor Relays and Phase Relays and other according to system requirements.

systems and control panel components into a coherent, cost-effective system.

### Product features

Enclosures for combination- and separate mounting.

- \_Enclosure protection IP 31 or IP 54.
- \_Power Termination on Terminal Blocks with identity.
- \_Control Terminals for Remote or PLC on terminal blocks with core and Block marking.
- \_Proper Earthing arrangement for separate motors.
- Ventilation & cooling / Anti Condensation arrangement with thermostatic control.

### Products

- \_Motor Control Units
- \_Conventional Motor Control Centre
- \_Compartment type / Modular type Motor Control Centre
- \_PLC Operated/Remote Operated Motor Control Centre
- \_Control Net Operated MCC

## Programmable Logic Control Panel

### System range

TRI TECH is manufacturer of PLC Panels for Plant Process. Machine Automation and Remote Control Units.

PLC Panel are optimized for safe, reliable and fully protected. It consists of;

The PLC panels complete with planning and calculation tools with easy access for maintain. The system range integrates control and protective devices, Such as Isolation Transformer, MCB, interposing relays, Normal TBs, Fusible TBs, Knife disconnect TBs Phase Barriers and others according to system requirements.

## Product features

Enclosure protection IP 31 or IP 54.

Isolation Transformer for Control Supply.

Identification between Different Potential level By Color.

Interposing relays for isolation of the Output Module.

Fusible Terminal Blocks for Analog I/O's.

Knife Disconnect Terminal Blocks for Digital Inputs.

Heat shrinkable core designation tags for I/O's identification.

Engrave Tags for component and system designation.

Separate Earth Strip for Instruments and System.

Separate Distribution TB's for 24 V DC and 220 V AC with combination bars.

Ventilation & cooling / Anti Condensation arrangement with thermostatic control.

## Products

Programmable control panel

DCS Panel

Marshalling Cabinets

Micro Processor based Process Control Panels

RTU Cabinets

## (ATS) Auto Transfer Switch

### Application

TRI TECH offer ATS, reliable and economical Auto transfer switch , The ATS are design for switching for one source of supply to another without going through a neutral (off) position. It offers economical and reliable solutions for smaller power supply system, either as an emergency 'supply, standby power supply or alternative sources. It is also suitable to be use in commercial buildings or industrial plants where reliability of power supply is an important requirement.

### Mechanism

The ATS are designed to have high interrupting capacity with double construction, which is mechanically held, electrically operated. It work on solenoid basic of activate the switch and relay, fully auto or manual operated, with this, there will be no maintenance needed and it allow more reliable and faster switching as compared to those using complicated motor and gear. The source of supply to the control circuit can be AC or DC and the switch position indicating the contacts are provided too.

### Features

- ATS has a built in Under and over voltage protection
- Main and Generator switching with selectable time delay and auto & manual mode.
- it's a unique technology with manual override.
- it's a maintenance free with solenoid operated
- The electrical and mechanical life of ATS is more than conventional ATS (contactors) because of large arc-chutes. It's also included with ATS Controller with Under/Over Voltage and Time delay.
- Connection between controller and ATS with built-in plug-in type cable, so no need of control wiring.

- In higher rating special Compact design and to easy installation, no need a big space only one enclosure which reduce the cost as well as the space at the site.
- No need extra external indications, all Indications and push buttons are built in the controller.

## Material

Simple Operation and compact size, all contacts and bus bars are of extra size copper with very low resistance level over the contact points which is able to provide quicker depreciation of heat. The movable arm and main contacts are housing in an arching chamber, it will enable the , to absorb heat and pass through the arching chamber.

## Cables Management Accessories

### Cable Trays

TRI TECH is manufacturer of Cable Trays with different profiles i.e. Perforated type, straight trench type with Covers and clamps, Bend and Risers, T Joints and Reducers. Final finishing after pre treatment of steel sheet we will provide the hot dip galvanized, Electro static powder coated. GI Material and Stainless steel sheet.

### Cable Ladders

The Exclusive design of Cable Ladder “Flange in” and “Flange Out” type Cable ladders with the using of extra reinforced design. For side walls and horizontal Supports. Horizontal Supports also provide the rectangular round Holes for proper dressing of cables. The fixing clamps, Bending rise & Down arrangements with Jointing plates, reducers also design for the best installation and customized degree adjustment.

The Cable Ladders is final finishing after pre treatment of steel sheet with hot dip galvanized and Electro static powder coated.

### Cable Mesh

Especially design of Cable Mesh for Food, Chemical and Process Industries in different sizes and Grades with Stainless Steel Rods. The fixing J Bolts with SS bolt n nuts and 3 mm thick SS Brackets for easy installation, A C type SS Clamps with Bolts, Washers and nuts arrangements for coupling of Cable Mesh.

### Supports and Brackets

Wall Mounted type adjustable up and down brackets manufacture with electro static powder coated and hot dip Galvanized Material. The ceiling type supports prepared with threading Rods And both side bended base support.

## Introduction & products

### Introduction

TRI TECH (PVT) LIMITED from its initiation tends to be best performer of manufacturing of low voltage switchgear (for all kind of industrial, commercial and domestic applications), Electrification & Instrumentation of Industries and plants.

Our Qualified staff with years of experience in Designing, Manufacturing, Automation, Plant Services and Erections integration delivers the exceptional quality and workmanship to meet and exceed our customer's expectation.

TRI TECH has experience in the design and manufacturing of control panels for all kind of industries with Compliance to IEC standards. We can assure you the highest quality and commitment to excellence.

We custom manufacturer Low voltage switchgear, PFI plants, control panels and motor control centers specifically for your industry. To guarantee the best control system performance we Offer a full service custom control panel design manufacturing environment where we can fabricate panels based on your requirements, and design a full set of drawings according to your specifications to satisfy your needs.

## PRODUCTS

TRI TECH (PVT) LIMITED is manufacturing the following low voltage products;

- LT Panels
- Bus Coupler Panels
- Power Factor Improvement Plants
- Power & Lights Distribution Boards
- Motor Control Centre
- Control Panels for water treatment plants
- PLC & DCS Panels
- Relay Logic Control panels
- Generator Control Panels
- Generators Synchronizing & Load Sharing Panels
- ATS & AMF Panels
- Control Desk
- Metering Panels

### Accessories & Others

- Cable Trays, Cable Trenches & Cable Ladder.
- Stainless Steel Cable Mesh
- Galvanized Cable Mesh
- Bus Tie Ducts
- All kind of Brackets and Supports
- Floor Boxes
- Store Racks & Document Cabinets
- Electronic Workstation & Tables
- Power Extensions Portable, Reel Type, Trolley Type and customized Requirement