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# Advanced Sys-tek Ltd

## Company Profile

# Content Overview



**ABOUT US**



**JOURNEY**



**VISION & VALUES**



**WHAT WE DO**



**PRODUCT PORTFOLIO**



**CAPABILITIES**



**KEY PROJECTS**



**CUSTOMERS**



**CREDENTIALS/  
VOICE OF  
CUSTOMERS**

# About Us

- Pioneers & Market Leaders in the field of Instrumentation Automation, Terminal Automation and Metering systems in India, with 300+ Installations
- Well established Quality System with an ISO 9001:2015 Certification and Safety System with ISO 45001:2018 Certification
- Scalable Infrastructure with 153,000 sq. ft. facility, 5000 sq. ft built up fabrication space, 3000 sq. ft. Diesel Exhaust Fluid Manufacturing Plant and 40,000 sq. ft. Office Space
- Over 35 years of experience in providing Solutions & Systems which include Design, Engineering, Procurement, Project Execution, Software Development, Commissioning and after-sales support.
- Leadership Team with 300 cumulative Years of Industry Experience
- Global Distributors Representing AST in Key Countries in LA, MEA and SEA



# Our Journey

**1988**

Advanced Spectra Tek Pvt. Ltd. Was Started by Promotors (60%) & Spectra Tek UK (40%)

**1996**

Daniel Measurement & Control Inc, USA acquires Spectra Tek UK

**1999**

Advanced Spectra Tek Pvt Ltd becomes Daniel Measurement & Control India Pvt Ltd

**1999**

Emerson Electric Co USA acquires Daniel Measurement & Control Inc, USA

**2007**

Emerson Acquires Metering Business from Daniel Measurement & Control India Pvt Ltd

**2012**

General Electric acquires controlling stake in Advanced Sys-tek Pvt Ltd

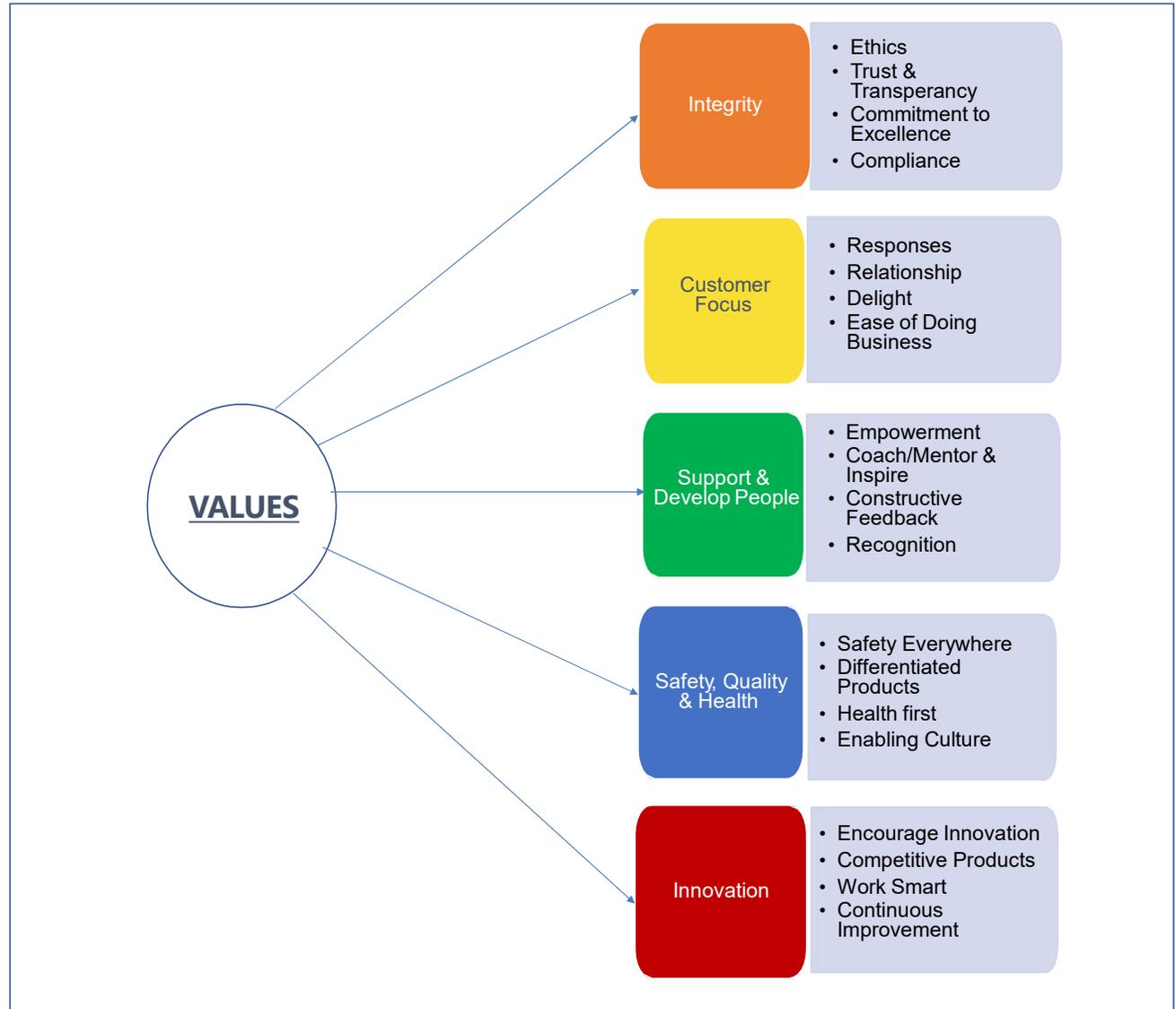
**2018**

Promotors buy back General Electric's stake and is now wholly owned by the Promotors

# Our Vision & Values

## VISION

To be the most preferred partner for Products, Engineered solutions and Services in diverse industrial sectors in India and the Global market.



# What We Do



## LARGE INSTRUMENTATION PACKAGES WITH SCADA

Process Automation and control systems with SCADA for refineries, ports, terminals



## TERMINAL AUTOMATION

Automation of truck and wagon loading terminals



## LIQUID & GAS METERING AND PROVING SKIDS

Skids for filtration, pressure reduction and metering.



## SKIDS FOR MOBILE DISPENSING UNIT

Accurate Dispensing of Fuels with Additives at Retail Outlets



## DIESEL EXHAUST FLUID

Plant and solutions for manufacturing DEF, DEF Sale



## SOFTWARE SERVICES & PRODUCTS

Full range of Software Services & Products



## DEFENCE

Injection skids for chemicals, additives and dyes, Force Multipliers for Armed Forces



## SERVICES

Operation, Maintenance and Training support & Services

## Group Companies



# Our Group

## AST Environment Solutions Pvt Ltd



- 100% subsidiary of the Company.
- Manufacturing of Diesel Exhaust Fluid (DEF) AdBlue®
- DEF consumption directly proportional to diesel consumption of vehicles compliant with Euro 4, 6 and Bharat Stage VI compliant Engines
- Capacity - 16MT per day

## Terranomous Systems Pvt Ltd



- Joint Venture Company.
- Development & Manufacturing of AI based Unmanned Ground Vehicles for diverse applications such as under ground mine operations, surveillance, surveying, robotic arm, material handling equipment, land mine detection
- Prototype of the Product expected to be ready by March 2025

# Large Instrumentation Packages and SCADA Systems

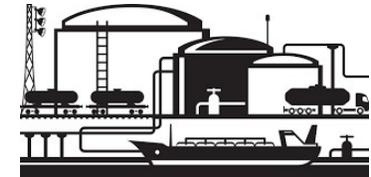
REFINERIES



LPG BOTTLING PLANTS



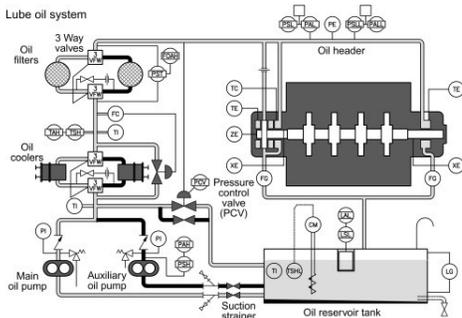
PORTS



SCADA



LUBE PLANTS



LPG STORAGE TERMINALS



OIL STORAGE TERMINALS



# Large Instrumentation Packages

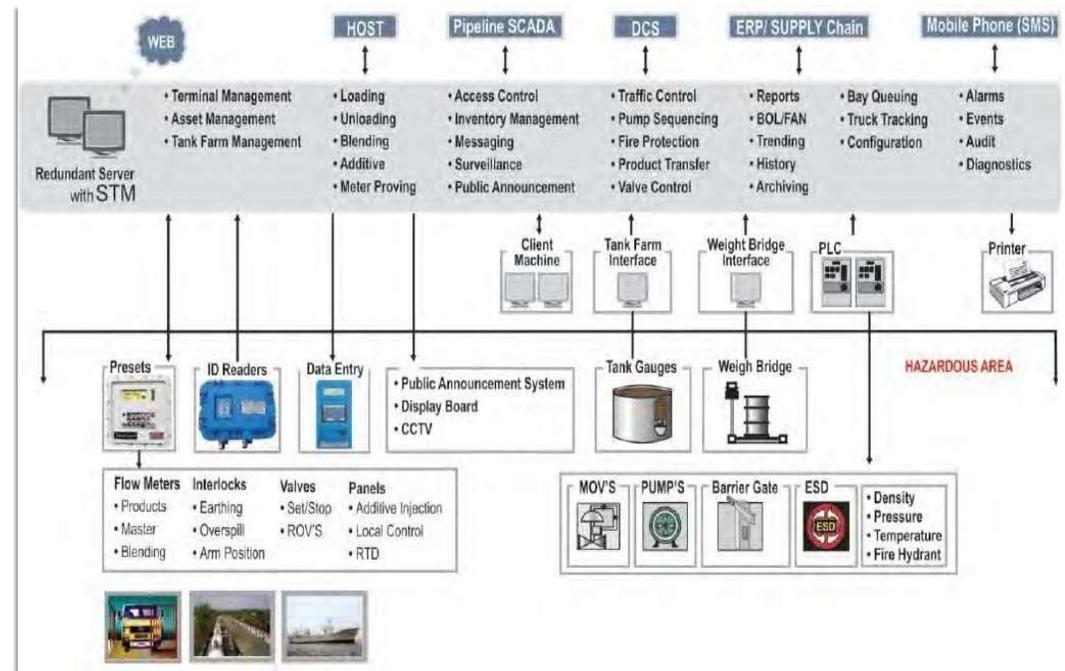
- Complete Design, Engineering, manufacture, Supply, installation commissioning and post warranty services under one roof.
- Customized automation system design for storage terminals, barge loading facilities, LPG & LNG handling facilities, port terminals, fuel farms, factory processes, chemical plant processes, DEF AdBlue® manufacturing plants, brewery plant processes, lube plants etc.
- SCADA Systems Design, Development and Implementation for diverse applications
- Complete ownership of hardware and software required for such type of automation systems.

## Real Time Interfaces

- DCS
- PLC
- Safety Systems
- Level
- Flow Measurement and Control
- Blending
- Additive Injection
- Temperature
- Pressure Measurement and Control
- Tank Gauging / Inventory Management
- Fire & Gas Detection
- Hydrocarbon Detectors
- CCTV Surveillance Systems
- Access Control Systems

# Terminal Automation Systems

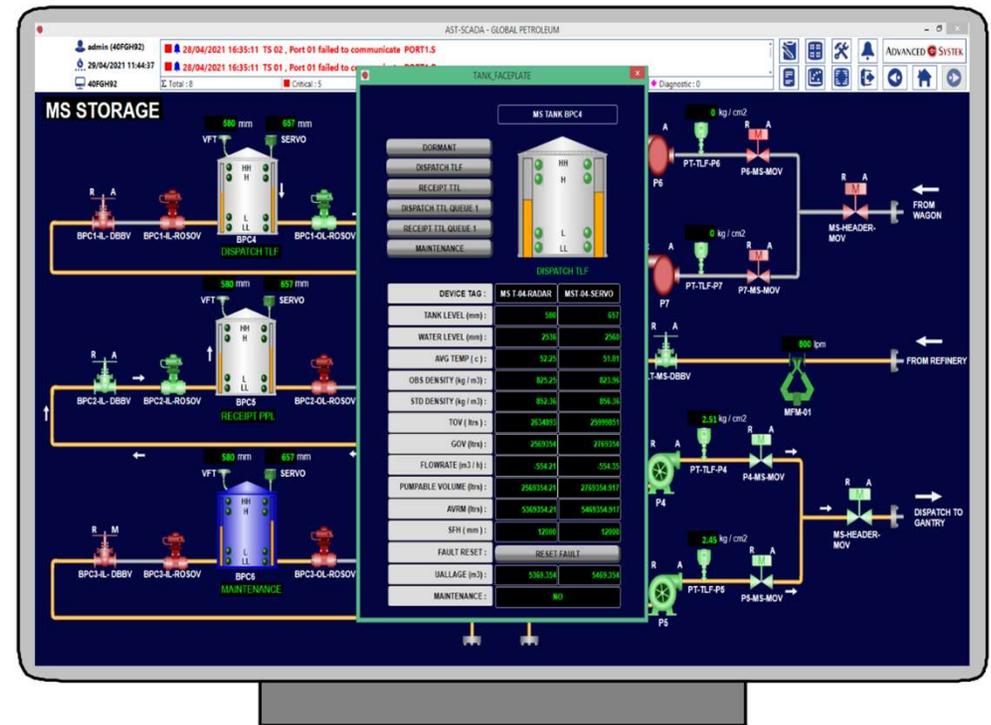
- Complete Design, Engineering, manufacture, Supply, installation commissioning and post warranty services for terminal automation systems under one roof.
- Systems designed for Truck loading terminals, barge loading facilities, LPG handling facilities, port terminal automation etc.
- Complete ownership of hardware and software required for such type of automation systems
- Smart Terminal Manager (STM) – Proven Terminal Management System with more than 200+ installations



# Terminal Management System

## SMART TERMINAL MANAGER

- Facilitates and streamlines Terminal operation
- It supports key activities such as loading and unloading tank trucks and rail wagons, as well as managing product transfers through pipelines, all while enabling centralized monitoring for enhanced efficiency
- AST also specializes in upgrading / replacing the TAS software using existing field Instruments with minimum down time.



# STM – Salient Features

|                               |   |                                       |  |
|-------------------------------|---|---------------------------------------|--|
| 200+ Successful installations | Cyber Security Certified                                | High System Availability              | High Scalability and Expandability     |
| User Friendly Interface       | Customizable  | Integration with various ERP System   | Role Based Access                      |
| Advanced Alarm Management     | Real-time & Historical Trend Monitoring                 | Extensive Operator Actions and Events | Comprehensive Data Logging & Reporting |
|                               | Interfaces with different Field devices and sub-systems | Data accumulation and Analytics       |  |

# STM – Major Modules



Customer SAP Interface, Planning And TT Scheduler



Access Control and CCTV Surveillance



Loading and Unloading operations



Inventory Management System



Pipeline Receipt/ Dispatch System



Safety Instrument System (Safety PLC, ESD)



Process Instrument System (DCS, Process PLC, VFD)



Billing and Invoicing

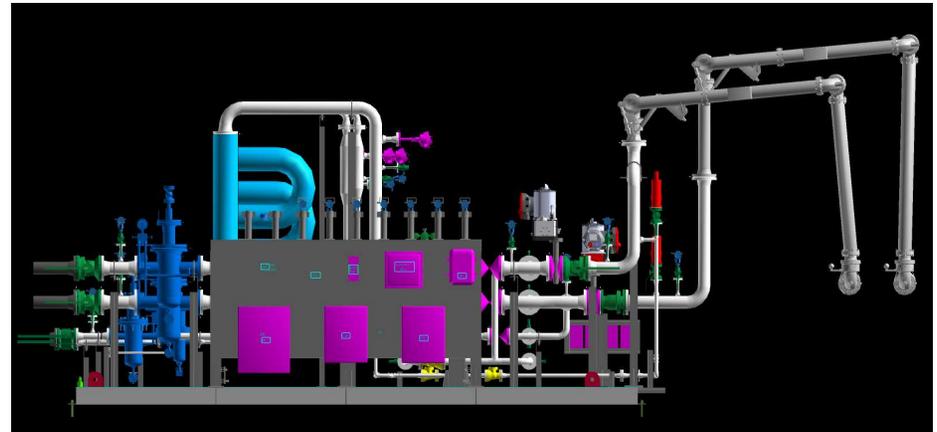
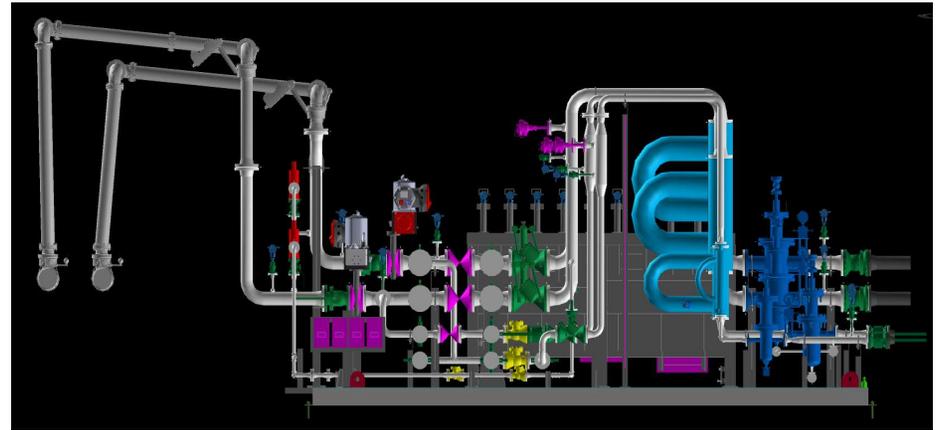
# Liquid/Gas Metering & Proving Systems

- Metering Systems are used for fiscal Custody Transfer of Hydrocarbons
- Liquid and Gas Metering systems are skid mounted Flow measurement and computational devices that accurately meter the product that flows through.
- We design, engineer, manufacture, supply, install, commission, validate and provide after sales support for metering skids as per the latest and relevant liquid and Gas measurement standards (API, AGA, ISO etc).



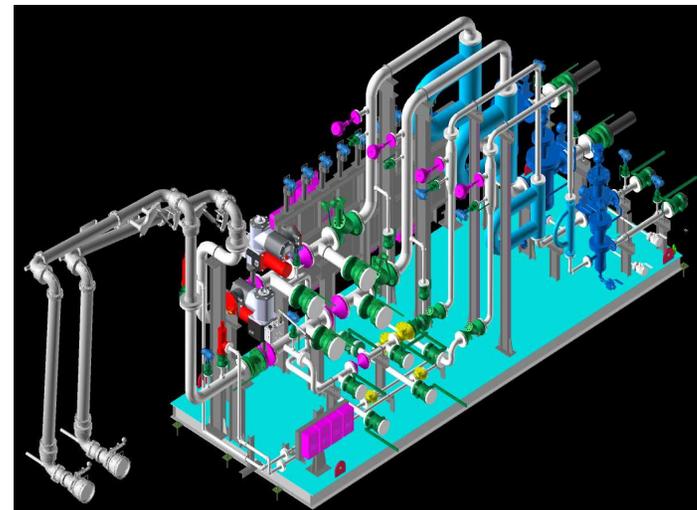
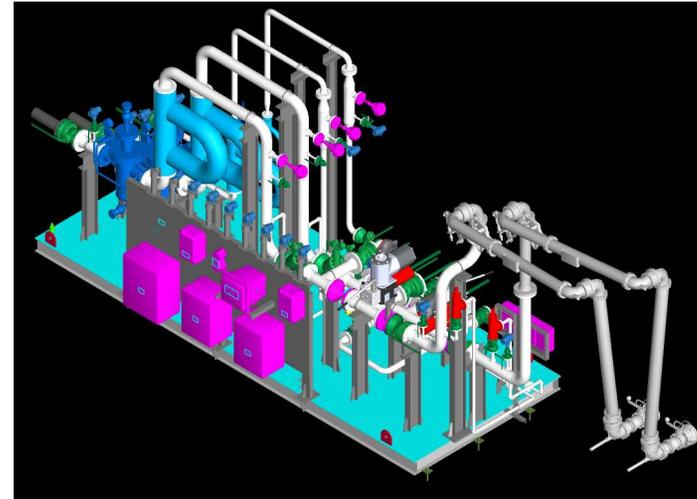
# Our Metering Systems Experience

- Service: Gasoline, Ethanol and Diesel
- Configuration: 3 x 100%
- Flow Element: Coriolis Meters
- Application: Tank Truck Loading
- Size: 2 x 4-inch plus 1 x 2-inch
- Custody Transfer Weights & Measure Sealed
- Scope: Design, Engineering, Manufacturing, Supply, commissioning, validate and provide after sales support



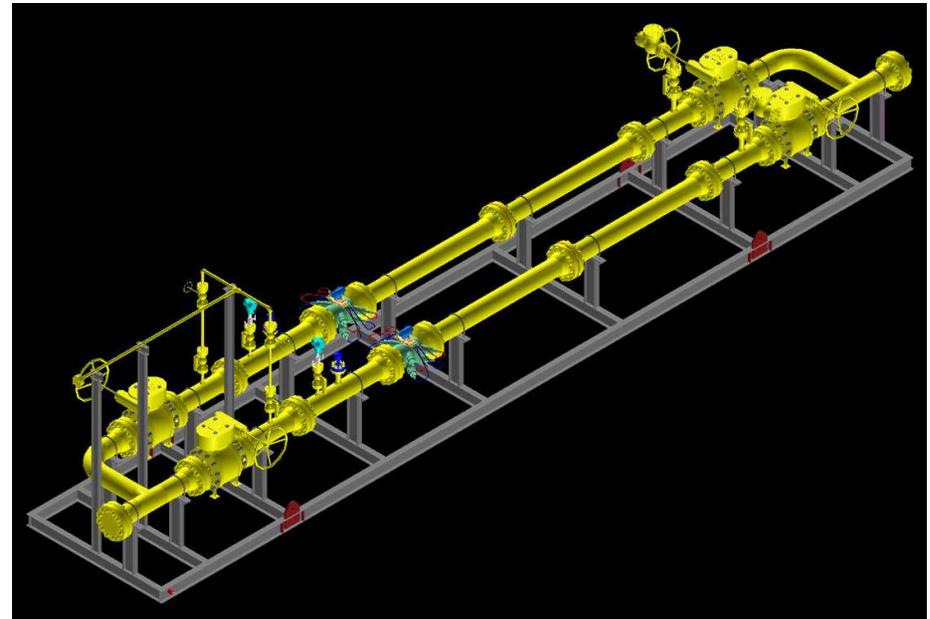
# Our Metering Systems Experience

- Service: Gasoline, Ethanol and ATF
- Configuration: 3 x 100%
- Flow Element: Coriolis Meters
- Application: Tank Truck Loading
- Size: 2 x 4-inch plus 1 x 2-inch
- Custody Transfer Weights & Measure Sealed
- Scope: Design, Engineering, Manufacturing, Supply, commissioning, validate and provide after sales support



# Our Metering Systems Experience

- Service: Natural Gas
- Configuration: 2 x 100%
- Flow Element: Ultrasonic Meters
- Application: Fiscal Metering Skid
- Size: 2 x 8-inch #600
- Custody Transfer
- Scope: Design, Engineering, Manufacturing, Supply, commissioning, validate and provide after sales support



# Skids for Mobile Dispensing Units

- Used in unloading Tank trucks in Retail Outlets
- Specially designed Batch Controller to display volumetric Flow and amount payable
- Specially designed to meet the safety requirements of Retail Outlets
- User friendly operation.
- Can work both in local mode and also can be connected to Supervisory System



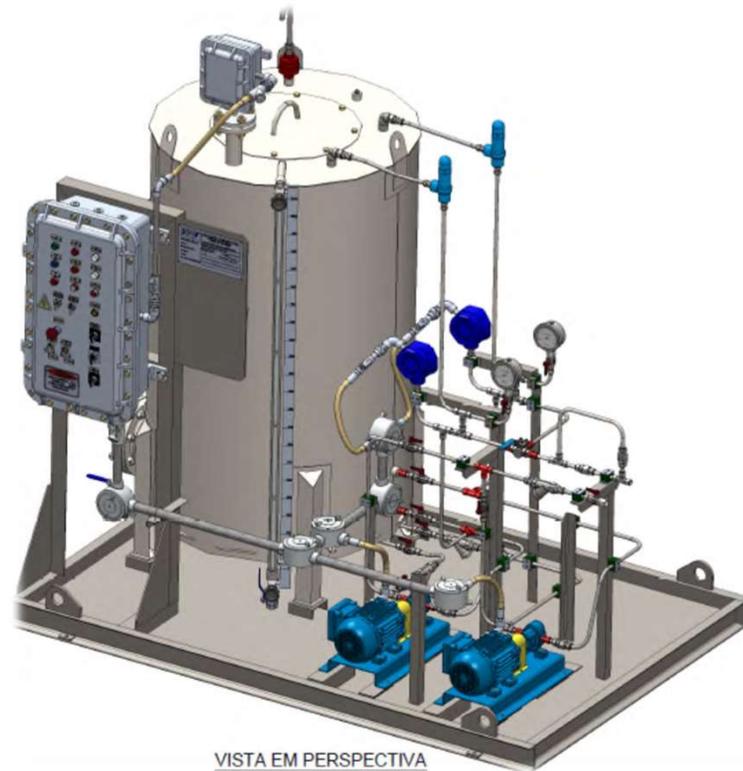
# Diesel Exhaust Fluid (AdBlue®) Plants

- Diesel Exhaust fluid is used in diesel vehicles to reduce the NOx content in the exhaust.
- The fluid reduces the NOx into nitrogen and water in the exhaust thereby reducing air pollution caused by diesel vehicles.
- Adblue® is a trademark of VDA (Association of German Automobile Manufacturers). It is a mark of quality for DEF products and a VDA license indicates that the DEF product meets the requirements of ISO 22241
- Fully automated design to conserve energy and minimise human intervention



# Additive Injection Systems

- Complete Design, Engineering, Manufacture, Supply, installation, commissioning and after sales support for following applications:
  - Chemical Injection
  - Biocide injection
  - Dye Injection
  - Blending Systems
- We design completely automated systems.



# Products



## BATCH / ADDITIVE CONTROLLERS

Smart Controller for loading/additive injection applications



## PROXIMITY CARD READERS

Access Control Card readers for vehicles and personnel



## GROUNDING/EARTHING DEVICE

Ultimate safety device for Static Ground detection and truck identification .



## MAGNETICALLY LOCKED VALVES

Secure Locking arrangement for needle valves



## OVER SPILL DETECTOR

Most accurate device for detection of overspill condition for tank trucks



## PULSE TRANSMITTER

Pulse Transmitter / generator for converting rotatory motion to pulse signals

# Batch Controller

## Smart Load®

- Electronic Preset used to measure & deliver precise quantities of Product in loading and retail applications.

### Features:

- Controls Single or blended product loading with additives & Blends
- Direct interface with flowmeters, Safety interlocks, card readers & automation software
- Controls Digital Control valves, additive injector blocks
- Can Control up to 4 products / blends and six additives
- Temperature & Pressure compensations as per API, IP or linear methods
- W&M approved for use in custody transfer as per OIML R117.
- PESO, IECEx , ATEX approved for use in Gr. IIA, IIB.





# Grounding/Earthing Device

## Smart Ground Detector +®

Used in Terminal Automation as well as used in wide range of applications like Process, Chemical, Petrochemical, Pharmaceutical and Paint Industries

### Features:

- Ensures true grounding by connecting to vessel only and not through any structure.
- Easy connection with crocodile clamp or rugged plug & socket
- Detects resistance in the earth loop and Monitors earth potential
- The Earthing Status can be transmitted over a remote computer through built-in serial port
- ATEX / IECEx certified for use in hazardous area Gr IIA/ IIB
- PESO Approved



# Tamper Proof Needle Valves

## KeySpin

An anti-tamper device designed to prevent unauthorised operation of instrumentation valves.

### Features:

- Used for secure operations of Digital Control Valves, ON-OFF Valves, Throttling Valves, and Needle Valves in Flow metering & Control applications.
- The Needle valves are available in various sizes from 1/4" to 1" inlets
- Needle valves available in 316 stainless steel body
- Protection against vandalism and un-authorized use



# Over Spill Detector

## Over Spill Detector

Prevents Overspill during loading operation of any hazardous/ non-hazardous liquid

### Features:

- Overspill detection sensor is integrally fitted to the drop tube.
- Can be fitted to any top loading arm.
- Highly accurate and zero drift sensing technology
- Fail safe operation.
- No moving parts
- PESO Approved for use in Zone 0 applications.



# Pulse Transmitter

## Pulse Transmitter

Generates Pulses to convert a rotary motion into electrical pulses proportional to the number of revolutions

### Features:

- Generates Dual pulses for one complete revolution.
- Complies to Level A pulse security
- Can be fitted to all PD meters with customised couplings
- PESO Approved.



# Our Capabilities

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- Project Management
- Design & Engineering
- Quality Assurance & Control
- Diverse Software Applications
- Services

# Project Management

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- Define Structure
- Goals and Objectives
- Planning, Scheduling and Monitoring
- Scope and Change Management
- Risk Management
- Monitoring and Reporting
- Quality Management
- Stakeholder Management
- Communication Management
- Performance Management
- Project Closure
- Lessons Learnt

# Design and Engineering

- Terminal Automation Systems
  - Custody Transfer Metering Skids
  - Fuel Farm Automation
  - LPG Plant Bulk TT Loading/Unloading and Cylinder Counting Automation
  - Lube Plant Automation
  - Factory Process Automation
  - Brewery Plant Process Automation
  - Chemical Plant Process Automation
  - DEF AdBlue® Manufacturing Plants
  - Blending and Additive Systems
  - Mobile/Fixed Dispensing Units
- P&IDs
  - General Arrangement Drawings
  - Cause and Effect
  - Block Diagrams
  - Loop Diagrams
  - Piping and Structural Design
  - 3D Models
  - Functional Design Specifications
  - Data Sheets
  - Stress Analysis
  - Pressure Drop Calculation

# Quality Assurance & Control

## Assurance

- Defining Quality Design & Engineering Specifications
- Defining Quality Procedures
- Root Cause Analysis
- Corrective and Preventive Action Plans
- Adherence to QMS
- Monitoring & Achieving Departmental Goals and Objectives with Cadence System
- Training

## Control

- Monitoring & Adherence to Processes and Procedures
- Inward Inspections
- In Process Critical Inspections
- Final Inspections
- Quality Documentation
- Traceability / Material Record Book
- Certification and Clearance

# Software

- **Customized Applications** – Customized Application Development to optimize Business Performance
- **Product Engineering** – Quality Software Product Development meeting Customer's specific requirements
- **Analytics & Insights** – Innovative Solutions development to transform data assets to actionable insights
- **Cloud** – Next-Gen Cloud based solution development to accelerate digital transformation
- **Internet of Things (IoT)** – Solutions development to connect, monitor and control smart consumer/industrial devices, 'Things'
- **Embedded Software** – Firmware development for varied range of Microcontrollers



# Services

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## **After-Sales Service -**

- 24x7 Onsite Support
- Remote Support through dedicated expert
- Comprehensive Annual Maintenance Contracts
- Calibration Service
- System Upgrades and enhancement
- Plant Automation and upgradation

# Key Projects - Executed

| Sr. No. | Project Details   | Approximate Value (MUSD) |
|---------|---|--------------------------|
| 1       | Automation System for 18 Locations – Truck Loading, Tank Farm, Blending etc           | 6.90                     |
| 2       | Terminal Automation System at Nigeria   | 5.96                     |
| 3       | Terminal Automation System, CCTV, Access Control, Tank Farm etc at North India        | 3.68                     |
| 4       | Automation for various Enclosures   | 3.65                     |
| 5       | Terminal Automation System for 8 Locations in India                                   | 3.14                     |
| 6       | Automation for various locations in India   | 3.03                     |
| 7       | Terminal Automation System – Truck and Wagon Loading Automation in South India        | 2.89                     |
| 8       | Terminal Automation System, Truck & Wagon Loading Automation in South India           | 2.67                     |
| 9       | Automation for 4 Locations – Truck Loading, Tank Farm, Fire Alarm System etc          | 2.54                     |
| 10      | Terminal Automation System at Mumbai  | 2.31                     |
| 11      | Automation System at East India   | 1.72                     |
| 12      | LPG Bottling Plant Automation – Bulk TT Unloading and Cylinder Counting in West India | 0.85                     |
| 13      | Additive Skids at 7 Locations   | 0.75                     |
| 14      | MDU Skids at Various Locations Pan India  | 0.51                     |
| 15      | Blending Skid with RVP Analyser and Gas Chromatograph at Nigeria                      | 0.27                     |

# Key Projects – Under Execution

| Sr. No. | Project Details   | Approximate Value (MUSD) |
|---------|---|--------------------------|
| 1       | Terminal Automation System at West india  | 7.03                     |
| 2       | Terminal Automation at South India  | 6.02                     |
| 3       | Terminal Automation at North-East India   | 5.24                     |
| 4       | Terminal Automation at South India  | 4.21                     |
| 5       | Terminal Automation System at Mongolia  | 3.50                     |
| 6       | Electrical and Instrumentation Works at South India                                     | 3.03                     |
| 7       | Airport Fuel Farm Automation with Truck Loading and Unloading at West and Central India | 2.04                     |
| 8       | LPG Bottling Plant Automation at East and South India                                   | 1.26                     |
| 9       | Liquid Filtration, Custody Metering and Pressure Regulating Skids at North India        | 1.01                     |
| 10      | Liquid Custody Transfer Metering Skid at North India                                    | 0.24                     |

# Key Customers

- Gulf Farabi, Saudi Arabia
- LPRC, Liberia
- Pedrazzini, Switzerland
- Petrofac, Sharjah
- Hindustan Petroleum Corporation Ltd.
- Bongaigaon Refinery & Petrochemicals Ltd.
- Bharat Petroleum Corporation Ltd.
- Oil & Natural Gas Commission Ltd.
- Shell, Hong Kong
- VOPAK, Netherlands
- India Oil, Mauritius
- Petroplus, Switzerland
- IEC, Nigeria
- Adani Group
- Shell, Hazira
- Nipco Plc, Nigeria
- PT Pertamina, Indonesia
- Indian Oil Corporation Ltd.
- Indian Oil Tanking Pvt Ltd.
- Reliance Industries Ltd.
- Gas Authority of India Ltd.
- Nayara Energy
- Petro Brazil
- Cairn Energy
- GSPL/GSPC
- TOTAL, Tanzania – Gapco
- Oil India Limited
- Petronet LNG
- Connex Petroleum, Liberia



# Credentials (Voice of Customers)

## GAPCO

M/S Advanced Sys-Tek (AST) has supplied and installed Fully Automated Truck Loading Gantry at Dar Es Salaam Terminal of GAPCO Tanzania Ltd, in 2013. This Terminal is the biggest facility with storage capacity of 100,000 Cubic Meters among Oil Marketing Facilities in Tanzania and distribution through 8 bay Multiproduct Truck Loading Gantry for Gasoline, Gasoll, Kerosene and Jet A1 product loading.

*"This Smart Terminal Manager system has helped us in improving our productivity and' throughput while imparting adequate security measures."*



M/s. Advanced Sys-Tek Pvt. Ltd. has automated country's first state-of-the-art Terminal of NIPCO PLC at Lagos in Nigeria having storage and distribution facility of White Oil (AGO, DPK, PMS) & LPG products consisting of 3 floating Tanks, 4 Fixed Roof Tanks & 3 Spheres. The distribution is carried out through 13 bays.

*"We are happy to recommend Advanced Sys-Tek Pvt for any requirement with respect to automation of storage and distribution facility."*



### HOME

299-300 GIDC Makarpura,  
Vadodara – 390010, Gujarat,  
India



### SUPPORT

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### CHAT 24/7

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