



SANJOY KUMAR CHAKRABORTY

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Instrumentation Control & Automation in Maintenance, Engineering, Project execution, Erection, Commissioning and, Laboratory set up for calibration.
Incorporation of ISO and TPM

Key Skills

Plant & Utility Maintenance.

Project Management

Modifications, Developments

Equipment Preventive
, Predictive & Breakdown
Maintenance as per IMS

Reporting & Documentation

Safety/Regulatory Compliances

PM Module.

Resource Optimization & Utilization
Team Management & leadership, communication and presentation skills.

Academic Credentials

- **M. Tech.** – Applied Electronics and Instrumentation From West Bengal University of Technology (DGPA -8.64)
- **Chartered Engineering** from Institution of Engineers (India).
- **Information Technology** from CMC Government of India.
- UNIX , C , C++
- **Publications** – 2 nos. in International journal.

Foreign Visit:

Czech Republic (Europe), China.

A competent professional having M. Tech with more than 22 years of experience in plant Maintenance, Engineering and projects, erection, commissioning and team management.

Profile Summary

- ❖ Experience in different types of Plants & utility **maintenance, project execution, engineering** and team management in **Chemical plants & Liquid resin plants, Resins Dryer plants, Solar, Steels, By product of steel, FMCG (edible oil), Cement plants etc.**
- ❖ Skilled In variety of areas from technical proposal through to Engineering and project coordination for Instrumentation, modifications, procurement, automation & control systems.
- ❖ Planning & execution of maintenance and project activities and through a large group of skilled workman, technicians and engineers.
- ❖ Worked as a Head of the department Instrumentation in different organizations.
- ❖ Involvement of Honeywell DCS, Rockwell PLC, Siemens PLC system. system Installation and commissioning experience in Automation & control systems using various types of Controller like single Loop, Multi Loop controller, PLC & DCS system, SCADA .
- ❖ Experience in **Solar** Shell manufacturing plant with its Utility plants maintenance and projects.
- ❖ Involvement in Terminal Automation System.
- ❖ Instrument **Laboratory set up** in different organization as per ISO standard.
- ❖ Managing implementation & documentation of Integrated Management System comprising of ISO9001, OHSAS18000, ISO14000, ISO45001 and taking challenges to face external audits.
- ❖ Experience in **FMCG** (edible oil) Refinery, Winterization and Vanaspati and packing plants.
- ❖ Effective execution of Preventive Maintenance schedules of Instruments with system to increase the equipment uptime / reliability. Conducting RCA of breakdowns. Involvement in spares inventory management system.
- ❖ Experience in steel plant projects and cement plant project of Tata Co.Ltd.as a erection & commissioning engineer and as a maintenance engineer in Blast Furnace.
- ❖ An effective communicator with exceptional analytical, problem-solving and negotiation skills with significant exposure in **managing & leading teams.**
- ❖ Maintenance in fire detecting system.
- ❖ Core member of safety committee and regular follow up of meeting.
- ❖ **Foreign visit** for project engineering work, attending conference.
- ❖ **Worked as a site in charge** also during the time of project execution.

Career Timeline

- **THERMAX LIMITED** as a Dy. **Manager** (Instrumentation) (HOD) location Adani Solar, Gujarat, India joined on December 2017.
- **COURSER TECH**, from 2016 to 2017 as a **Sr. Manager** Instrumentation.
- **HUTNI PROJEKT FRYDEK-MISTEK a.s, Czech Republic(HO)**, from 2014 to 2016 as a **Sr. Manager** (Instrumentation. and Automation (HOD)).
- **POUSHALI ELECTRONICS** from 2012 to 2014 as a **Manager**.
- **RUCHI SOYA INDUSTRIES LTD** from 2009 to 2012 as a **Deputy Manager** (Instrumentation) (HOD).
- **ALLIED RESINS AND CHEMICALS LTD.,** Kolkata from 1997 to 2009 as a **Sr. Executive Engineer** - Instrumentation (HOD).
- **ADVANCED SPEC TRA TEK PVT. LTD.,** Gujarat (*Multinational; Presently known as Denial measurement solution Pvt. Ltd.- collaborated with Denial – U.K.*) 1997 (1 year approx.) as a **Senior Service Engineer**.
- **USHA MARTIN INDUSTRIES LTD.,** Jamshedpur from 1994-1996 as an **Engineer- Mini Blast Furnace (MBF)**.
- **BEEBEECONTROL PVT. LTD.** From 1993-1994 as an **Erection & Commissioning Engineer**.
- **IMSICON (EASTERN) PVT. LTD.** From 1990 to 1993 as a **Trainee Engineer**.

Work Experience

- 1) **Thermax Limited (ISO-14001: 2004 certificate, OSHAS 18001:2007 certificate)**
Working at site Adani Solar PV Limited and looking after Operation & Maintenance of Utility.

Joining on December 2017.

Designation: Dy. Manager (Instrumentation), Operation & Maintenance (Departmental Head)

Maintenance Management and Project Management:

- Responsible for overall availability, reliability and integrity of Plant assets.
 - Day to day Maintenance of preventive maintenance of utilities including Air compressors, vapour absorption Chillers, Cooling Towers, RO Plant, DI water, ETP & STP, HVAC, Process Chemical handling plant, Ultra Pure Water Plant, Fire Hydrant system, etc.
 - Support to client for different project activities related to all plants including any modification.
 - Plan and provide Maintenance services of plant and related accessories which include Preventive, Predictive, Breakdown maintenance, troubleshooting and root cause analysis.
 - Ensure Maintenance task execution with quality & safety by ensuring compliance to standards, procedures and best practices.
 - Ensure compliance to maintenance schedules.
 - Coordinate with Operations team for effectively carrying out maintenance activities.
 - Ensure AMC's for various services are in place and carried as per schedule.
 - Interaction with vendor/Instruments manufacturers.
 - Provide customer support by giving commitment of delivery schedule and post commissioning engineering services.
 - Provide site supervision work for erection and commissioning activities related to Utilities areas.
 - Enabling audit of maintenance systems and timely adherence to audit schedules.
 - Submission of daily, weekly, monthly MIS and other reports.
 - Provide support for material procurement and inventory control.
 - Organize regular periodic meetings & trainings for staff & engineers for discussion on current work issues and exploring solutions for enhanced operations.
 - Develop skills and competency matrix to identify improvement needed. Establish performance expectations and conduct regular review.
- ❖ **Total ISO documentation preparation and taking challenges to face external audits.**

- 2) **COURSER TECH, ISO 9001:2015 certified**

(Courser Tech Excellence in Design Engineering supply installation commissioning after sales and service, customer relations and technical expertise the along with the gradual growth of engineering section in India. Courser Tech grew and went on represent some of international standard brands in the world of electrical and process automation system. From selecting the optimal products for individual applications to guidance for correct installation and assistance in commissioning, calibration services and annual maintenance contracts).

Worked in different sectors like Industry, Drinking and Waste Water Treatment Plant, Health care Sector, Marine and Ship builders.

Duration: 2016 to 2017

Designation: Sr. Manager Instrumentation.

➤ **Details:**

Supervision for erection and commissioning activities, provide site supervision to maintenance contract, calibration contract, Interaction with vendor/Instruments manufacturers, involvement to techno commercial activities etc.

- 3) **HUTNI PROJEKT FRYDEK-MISTEK a.s, Czech Republic (HO), India Representative Office at Kolkata. (Project on-By Product Plant including Effluent Treatment Plant for 3.0 MTPA INTEGRATED STEEL PLANT, NMDC, NAGARNAR, and CHHATTISGARH).**

Project includes:-

a) Gas Condensation Plant (GCP)-CCP, FCP, GDP, TSP and DAP., b) H₂S Recovery Plant (HRP)-SCP, LSP, SRP, SSP and CSP. c) Final Gas Cooling Plant (FGC). d) Naphthalene Stripping Plant (NSP) e) Utility & Services Units (WSP, CWP, U) f) Effluent Treatment Plant (ETP).

Duration 2014 to 2016,

Designation: Sr. Manager Instrumentation & Automation (Head of the department)

Design Engineering, Project Execution with Commissioning:

Preparation of Instruments list in detail engineering, preparation of data sheets of all types of instruments control valves, pressure, temperature, flow, level, analyzers, laboratory instruments, instrument cables etc, data sheet of testing equipments (instrumentation) and discussion with vendors.

- Preparation of instrument Hook Up drawing with BOQ, instrument air line distribution scheme with BOQ.
- Preparation of Instrument cable tray layout, instrument and JB location plane and specification, instrument cable and JB schedule etc.
- Preparation of DCS Input-Output list with DCS hardware selection and discussion with DCS vendor for automation related issues, vendor supply automation related documents checking, preparation of control and panel room layout etc.
- P & ID checking of all Instruments control & indications according to the process requirement.
- Selection of Instrument & PLC systems requirement
- Meeting with vendor representatives, inspect vendor works & workshops.
- Preparation of Block Schematic Diagram of Plant Telephone Systems, P.A System, Equipment Layout Drawing of Telephone and P.A System and holding coordination meeting with consultant.
- All documents checking before submission to MECON. Regular follow-up with consultant MECON for any drawing related issues and meeting for drawing approval follow up with client NMDC for all issues.
- Technical meeting with all consortium partners (client, consultant, technology provider, Procurement Company) for solving of different technical issues.
- Total responsibility for supervision of Instrumentation erection and commissioning at NMDC site.
- Preparation of control philosophy of the plant.
- Guidance to departmental or other department for different engineering drawings or design related issues.
- Involvement of other projects.

4) **POUSHALI ELECTRONICS, (NSIC certified SSI unit and CRISI rated, well known manufacturer, supplier, exporter and service provider engaged in offering wide range of industrial electronic equipment throughout India).**

Duration: 2012 to 2014,

Designation: Manager.

(Associated with testing & calibration of different instruments, testing of control panel etc., supervision of the technical activities, follow up of different technical queries from clients.)

Details:

- Erection and commissioning support to our team at site.
- Involvement of Honeywell DCS (HC-900) system
- Associated with supervision of testing, calibration and commissioning of different field instruments like smart transmitters, Temperature Scanner, PID Controller etc. for measurement of temperature, pressure, flow, level etc.
- Meeting with client for different technical issues.
- Internal planning for smooth running of work at site.

5)

6) **RUCHI SOYA INDUSTRIES LTD, (Multinational; ISO 9001-2000, ISO 14000 and ISO 22000 certified company)**

a) 1000 TPH Refinery Plant (for unit 1, unit2, unit3) b) Winterization Plant (for unit 1, unit2, unit3) Vanaspati plant (for unit 1, unit2, unit3) d) 25 TPH Boiler plant e) 30 TPH Boiler Plant f) 3 MW Power Plant g) Packing Plants (two nos.), h) Central Instrumentation Laboratory Set Up as per ISO Standard

Duration: 2009 to 2012

Designation: Deputy Manager (Instrumentation) (Departmental Head)

(Associated with Ruchi Soya Industries Ltd. as Deputy Manager Instrumentation and as a departmental head for three years. Leading a large team of Instrumentation Engineers at different levels for maintenance, projects, modifications, spare parts maintenance, ISO and TPM jobs etc.).

Maintenance Management and Project execution:

- Responsible for day to day maintenance, shutdown, modifications & up gradations, root cause analysis of break-downs & tripping, diagnostics & troubleshooting, manpower management, spares management.
- Implemented automation to the oil gantry truck loading Endress+Houser system.
- Crystallizer project related to winterization plant, controlled by Rockwell PLC.
- Project execution of 1000 TPH refinery, 30 TPH Boiler and 3 MW Power plant.
- Modification of several parts of the Refinery, Winterization and Vanaspati plant for fine tuning.
- Modification of 25 TPH Boiler automation by Siemens PLC system.
- Central Laboratory set up for calibration and maintenance of all Instruments for all plants as per ISO standards.
- Delivered departmental training of process instrumentation with controls, for proper maintenance.
- Provided training of proper calibration of field instruments as per ISO standard.
- Incorporation with maintaining the ISO standards and procedures, TPM, playing with a major role.
- Maintaining spare parts and material procurement as per quality and set standard.

- Identifying areas for modification and recommending alteration to enhance operational efficiencies of the systems.
- Preparation maintenance schedules, conducting regular calibrations to ensure the performance capacity of various process control equipments.
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7) **ALLIED RESINS AND CHEMICALS LTD., Kolkata** (*Oldest chemicals plant in eastern India-ISO 9001 - 2000 and GMP certified company; presently executing formaldehyde plant in China and also doing export Formaldehyde more than 32 countries in the world.*)

a) Formaldehyde Plant (2 nos. in Allied Resins & Chemicals Ltd.), b) Formaldehyde Plant (one no. in China), c) Para Formaldehyde Plant, d) Phenol Formaldehyde Resins Plant. e) Urea Formaldehyde Resins Plant, f) Phenol Formaldehyde Dryer Plant (one no.), g) Urea Formaldehyde Dryer Plant (three nos. in different locations), h) Instrumentation Laboratory Set Up as per ISO Standard.

Duration: 1997 to 2009 ,

Designation: 1997-2001 Executive Engineer Instrumentation.

2001-2009 Sr. Executive Engineer -Instrumentation (HOD)

Maintenance Management and Project execution:

- Project handling of Formaldehyde plant including erection & commissioning of total plant Instrumentation & panel side by Honeywell DCS system. Responsible for day to day maintenance, shutdown, modifications & up gradations, root cause analysis of break-downs & diagnostics & troubleshooting, manpower management, spares management.
- Development of circuit drawings for the Incorporation of Honeywell HC-900 DCS system in place of Siemens PLC systems to Formaldehyde plant. Implementation the SCADA and logic by HC-900 Hybrid Control Design software with regular maintenance as per ISO standards and procedures.
- Erection and commissioning of Analyzer for Formaldehyde plant with regular maintenance including calibration.
- Changing of manual control Para Formaldehyde plant to DCS control by Honeywell HC 900 system with regular maintenance.
- Maintenance of chiller plants (Thermax make), Boiler plant (Thermax make).
- Bag Filter instrumentation erection & commissioning for Boiler.
- Changing from manual control Urea Formaldehyde and Para Formaldehyde Resin plant to **Honeywell HC-900 DCS** control plant.
- Imparted departmental training on plant instrumentation and its control engineering for reducing breakdowns and obtaining total Productive Maintenance.
- Planning, implementation including supervision of erection and commissioning of Wesman design one no. auto control dryer plant for Para Formaldehyde resins and three dryer plants for Urea Formaldehyde resins in different location with regular maintenance.
- Execution of project with maintenance of Thermax design burner with control system for Urea Formaldehyde dryer plant.
- Incorporated of computerized Data Acquisition System for Liquid Resins plant.
- Involvement for establishing formaldehyde plant and Para formaldehyde plant in China.
- Delivered training to the Chinese engineers for Formaldehyde plant process with DCS control, before establishing the same technology in China.
- Demonstration regarding the performance for Honeywell DCS HC-900 (hybrid control design system) working in our existing Formaldehyde plant, to TATA Chemicals Ltd. Engineers.
- Delivered training to engineering students for their B.Tech 3rd year project. Coming from different engineering colleges.

8) **ADVANCED SPECTRA TEK PVT. LTD., Gujarat** (*Multinational; Presently known as Denial measurement solution Pvt. Ltd.- collaborated with Denial – U.K.*)

Duration: 1997 (1 year approx.),

Designation: Senior Service Engineer

(Worked on Terminal Automation System related to Truck loading, Wagon loading in many plants in Gujarat Like HPCL, Gujarat refinery and Haldia petrochemical in West Bengal.)

Details:

- Terminal Automation System related to automatic truck loading and wagon loading system by Island controller, Batch controller, Mercury Terminal etc to HPCL project Gujarat, Gujarat Refinery project and Haldia petrochemical project.
- Erection and commissioning activities of related field instruments.
- Servicing related to the Terminal Automation System.

- 9) **USHA MARTIN INDUSTRIES LTD., Jamshedpur** (*Multinational; Alloy & Steel Division, ISO 9001:2008, ISO 14001:2004, Jamshedpur facility was the first steel plant in India to receive TPM certification from JIPM Japan*)

- a) Mini Blast Furnace (MBF)**
- b) Steel Melting Shop (SMS)**
- c) Instrumentation Laboratory Set Up (for ISO work & regular maintenance)**

Duration : 1994-1996,

Designation: Engineer- Mini Blast Furnace (MBF)

(Worked as in charge of Mini Blast Furnace for their Alloy and Steel division Jamshedpur. Project execution, Trouble shooting, modification, preventive maintenance jobs, also incorporation with maintenance of ISO standards and procedures to Mini Blast Furnace Instrumentation.)

Details:

- Day to day maintenance, shutdown, modifications & up gradations, root cause analysis of break-downs & tripping, diagnostics & troubleshooting.
- Regular maintenance of Mini Blast Furnace (MBF) Instrumentation.
- Project activities related to MBF.
- Hot metal temperature computerized data acquisition system incorporation to MBF.
- Preventive Maintenance work.
- Modification jobs.
- Maintenance to Blast Furnace Instruments as per ISO standards and procedures.
- Spare parts execution.
- Maintenance of SMS plant Instrumentations.
- Provided training for proper calibration of field instruments as per ISO standard.
- Imparted departmental training on plant instrumentation and control engineering for reducing breakdowns and obtaining total Productive Maintenance.

- 10) **BEE BEE CONTROL PVT. LTD.** (*Process control Instrumentation Engineers and manufacturer of accessories*)

Projects include:-

a) Slab Caster Project (Tata Iron & Steel Co. Ltd.), b) Hot Strip Mill Project (Tata Iron & Steel Co. Ltd.), c) Cement Plant Project (Tata Iron & Steel Co. Ltd.)

Duration : 1993-1994,

Designation: Erection & Commissioning Engineer

(Associated with Erection & commissioning of many projects in Tata Iron & Steel Co. Ltd. Jamshedpur like Slab Caster, Hot Strip Mill and Cement Plant etc.)

Details:

Planning & execution of instrument construction activities of engineering projects, Leading and performing through a group of technicians & skilled workman.

- **Slab Caster Project**
Client: Tata Co. Ltd.

Scope of work: Field instruments erection according to M.N. Dastur design, total wiring including DCS panel & Marshalling panel, field I/Bs, loop testing, commissioning with DCS TDC-3000 of Honeywell. **Worked as a site in charge also.**

- **Hot Strip Mill Project**
Client: Tata Co. Ltd.

Scope of work: Field instruments erection according to M.N. Dastur design, total wiring including DCS & Marshalling panel, loop testing, commissioning with DCS TDC-3000 of Honeywell

- **Cement Plant Project**
Client: Tata Co. Ltd.

Scope of work: supervision of field instruments erection, total wiring including panel, loop testing, commissioning with PLC of Rockwell system. **Worked as a site in charge also.**

- 11) **IMSICON (EASTERN) PVT. LTD.**

Duration 1990 to 1993 (Training on calibration, testing and commissioning of various instruments with controls.)

Training and worked with various instruments calibration, testing and commissioning of electronic instruments like Controllers, Temperature Scanner, Digital Indicator etc, control panel testing.

ACADEMIC CREDENTIALS DETAILS :

M. Tech. – Applied Electronics and Instrumentation. From WBUT year 2014

M. Tech. Project: Completed at Tata Power Company Ltd., Jamshedpur.

Project name: Boiler steam drum level control.

Publication-

1. Importance of three elements boiler drum level control and its installation in **power plant**- Sanjoy Kumar Chakraorty, Nilotpal Manna and Surodh Dey, *International journal of Instrumentation and control systems*, Vol 4, no 2 (2014) p-1(CITED BY 6).
2. Investigation on Study and Modeling Based Analytical Phenomenon of Cardiovascular System towards Heart Disease Detection – S. Bhattacharje Z. Das,M.Das,Sanjoy Kumar Chakraborty,S Bhatia,P.Kumari,B. Neogi. *International Journal of Advanced Scientific and Technical Research*, Available online on <http://www.rpublication.com/ijst/index.html> Issue 3 volume 6, Nov.-Dec. 2013

Degree -- A.M.I.E. (electronics and communication From Institution of Engineers (I) in 1992.

Guide of AMIE section B: Dr. K.K.Bose. (Ex. Prof. of Applied Physics, I.I.T. Kharagpur).

Others: Chartered Engineering from Institution of Engineers (I) in 1999.

Information Technology from CMC Government of India, UNIX , C , C++.

Foreign Visit:

- a) **Czech Republic** (Head office of Hutni)-for detail technical discussion & training about NMDC coke oven gas by product plant (Instrumentation) project for one month in the year 2014.
- b) **China** visit for International seminar for seven days in the year 2013.

MEMBERSHI:

- Corporate Member of Electronics & Telecommunication engineering division from Institution of Institution of engineers (I), Kolkata chapter.
- Executive member of Santoshpur Sanjivane, a nonprofit organization, working for underprivileged children in Bishnupur, Bankura, West Bengal.

PERSONAL SKILL:

- Communication skill , Commitment , Seriousness to the work.

KEY LEARNING'S :

- Maintenance Practices, Project execution, Managerial skills, Utility services,, Project Management, Computer skills, SAPPM module, 5S, KAIZEN, Technical skills.

PERSONAL DETAILS:

Date of Birth: 1st January 1966.

Passport No. K8119418 (valid up to 28/02/2023)

Communication Address: C/o Dr.Tarapada Chakraborty, Ambika Kundu Bye Lane, Ramrajatala,
P.O. Santragachi, Howrah-711004, W.B. India.

Marital Status: Married.

Wife's occupation: Scientist (Physics)

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