



CURRICULAM VITAE

Name : Satyaki Mukherjee

Company : SATCON, Kolkata, India

Position : Proprietor/Chief Engineer

Experience Summary : Thirty one (31) years' experience in Electrical design engineering. Experienced in Electrical design calculations, Electrical system studies using manual/software techniques, design/project engineering, erection supervision activities at site and commissioning in the field of thermal power plants (coal fired/ oil fired/ gas), industrial co-generation plants, captive power plants, chemical & mineral beneficiation projects, **HV/EHV outdoor/indoor/GIS substations (upto 400kV)** and material handling plants.

JOB SUMMARY

- SATCON (from Jan 2004 till date) as Proprietor (www.satcon.in)
- Saudi Electricity Co (SEC) - EAST (through Dar Al Riyadh Consultants), Dammam HQ, Saudi Arabia (from Jan 2000 to Dec 2003)
- Development Consultants Pvt. Ltd, Kolkata, India (from May 1999 to Jan 2000)
- The Kuljian Corporation, Philadelphia, USA (from Sept 1998 to April 1999)
- Development Consultants Ltd, Kolkata, India (from July 1989 to Aug 1998)

EDUCATION:

B.E. Electrical (1st class) from Jadavpur University, Kolkata in 1989.

MEMBERSHIP OF PROFESSIONAL ORGANIZATIONS:

Fellow - Institute of Engineers, India.
Professional Engineer (India)
Chartered Engineer (IEI)
Member – IEEE

Countries visited on work : USA, UK, UAE, Nigeria, Sierra Leone, Sudan, Oman, Qatar, Saudi Arabia, China, Lebanon, Bhutan, Nepal, Central African Republic.

EXPERIENCE IN DETAIL:

- **SATCON**

Position: Proprietor

Period: January 2004 till date.

CURRENT & EXECUTED PROJECTS IN INDIA (only major projects indicated)

1. Preparation of Detail project report (DPR) for conversion of existing 132/33kV outdoor air insulated substations at Pasighat, Aalo and Deomali of Dept. of Power to Gas insulated substations (GIS) in Arunachal Pradesh.
2. Basic and Detail engineering services (electrical, civil, structural, Substation automation) including contour survey and geotechnical investigation for installation of 220/132/33KV, 2x150MVA & 2x50MVA Outdoor grid substation of JUSNL at Godda, Jharkhand.
3. Basic and Detail engineering services (electrical, civil, structural, Substation automation) including contour survey and geotechnical investigation for installation of 220/132/33KV, 2x150MVA Outdoor grid substation of JUSNL at Garwah, Jharkhand.
4. Detail engineering (Electrical) for **400/220/132kV Outdoor Substation** of APTRANSCO at Jammalamadugu, A.P (On behalf of Techno Electric & Engg. Co., Kolkata).
5. Detail engineering services (electrical) for **220/132/33kV GIS Substation** at Sagardighi of WBSETCL, West Bengal (On behalf of Godrej & Boyce Mfg. Co. Ltd., Mumbai).
6. Basic and Detail engineering services (electrical, civil, structural) for installation of **220/132/33kV Outdoor grid substation** of JUSNL at Jainamore, Bokaro, Jharkhand (On behalf of Technofab Engineering Ltd., Faridabad).
7. Basic and Detail engineering services (electrical, civil, structural) for installation of **5 nos. 132/33kV Outdoor grid substation** of JUSNL at Chatra, Baharagora, Rajmahal, Jamua & Chandankiyari, Jharkhand (On behalf of Flowmore Ltd., Ranchi).
8. Design, Engineering and Consultancy services for **220/132/33kV Outdoor substation** at Ithkori, Jharkhand of JSEB (On behalf of Flowmore Ltd.)
9. Detail engineering for 5 nos. **132/33kV Outdoor Substations** at Jorhat, Bordubi, Bilasipara, Matia, Hailakandi and 1 no. 132/33kV GIS substation at Kamakhya in Assam

(On behalf of Alstom T&D India Ltd., Kolkata).

10. Detail engineering for 2 x 50 MVA, **132/33kV Outdoor Substation** at Serakol for WBSETCL (On behalf of Alstom T&D India Ltd., Kolkata).
11. Detail engineering for line bay extension at **400kV Outdoor Substations** at Patna, Ranchi and Malda, 220kV substation at Mariani and 132kV substation at Imphal of PGCIL (On behalf of Sterling & Wilson Ltd., Kolkata).
12. Detail engineering for **400/220/132/33kV new substations** at Howrah Foundry park and bay extensions at Laxmikantapur, Arambag, Uluberia of WBSETCL on behalf of Siemens Ltd.
13. Total Consultancy service for electrical, instrumentation, control and plant communication system of coal Handling plant of BCCL at Mahespur , Dhanbad (on behalf of S.K. Samanta and co. (p) Ltd.)
14. Detail engineering for **33/0.433kV** system upgradation for augmentation of Steel Melting and Forge shop at Arcvac Forgecast Ltd., Dankuni, and West Bengal.
15. Detail engineering for EBOP (Electrical balance of plant) package of **4x270MW thermal power plant** of Abhijit Infra Pvt. Ltd. at Chitarpur, Jharkhand (On behalf of Sterling & Wilson Ltd.).
16. Prebid Engineering and price estimation for **400/220 KV GIS substation** and EBOP package of 2x500 MW Thermal Power plant of Neyveli Lignite Corporation in Tamilnadu (on behalf of GTL Limited, Pune).
17. Detail engineering for **132/33/6.6kV GIS substation** and downstream ring main system for Construction power system of NMDC for 3 MTPY Integrated steel plant at Nagarnar, Chattisgarh. (On behalf of KEC, International, Gurgaon).
18. Detail engineering for **1x400kV Bus reactor bay extension** of PGCIL in Amritsar, Hissar, Nalagarh and Jalandhar on behalf of Sterling & Wilson Ltd.
19. Detail engineering for four (4) nos. **33/11/3.3kV** Indoor substations for DSP Modernization MV package (On behalf of Sterling & Wilson Ltd.)
20. Design & engineering services for **132/33kV AIS substation** at Suryamaninagar of Tripura State Electricity Co. Ltd. (on behalf of Areva T&D India Ltd.).
21. Electrical Survey & Audit work for **33kV and 415V power distribution system** and 12MVA electric Arc furnace for Steel Melting Shop and Forging Complex of Arcvac Forgecast Pvt. Ltd. at Dankuni, West Bengal.
22. Consultancy services for **33kV ring main system** including **11nos. 33/0.433kV substations** for National Institute of Technology (NIT), Rourkela, Orissa.

23. Design and engineering services for **3x132kV bay extension** at DPL, DPPS, Durgapur, W.B (On behalf of Siemens Ltd, PTD).
24. Complete Consultancy services for **11/0.415kV power distribution system** and plant controls for Coal Tailings Dewatering Plant at Tata Steel West Bokaro Coal Washery Plant (on behalf of Naresh Kumar & Co. Pvt. Ltd.).
25. Design & engineering services for two nos. **400kV Line dia. extension** at OPTCL, Meeramundali Substation in Orissa (On behalf of Areva T&D India Ltd.).
26. Design & engineering services for **400/33kV switchyard** of 4x270MW Thermal power plant of Abhijit Infra Pvt. Ltd. in Jharkhand (On behalf of Areva T&D India Ltd.)
27. Many other **400/220/132/33kV substation design** on behalf of Alstom/Siemens/Sterling & Wilson and other MNCs as Proprietor of Satcon.

CURRENT & EXECUTED PROJECTS OUTSIDE INDIA (only major projects indicated)

1. Review and approval of vendor drawings for 33kV and LV rural electrification works in 29 communities of Sierra Leone.
2. Detail engineering for extension of 220/20kV transformer bay at existing 220kV Khost substation and 20kV overhead line from Khost substation to Camp Clark ANSF base in Afghanistan (on behalf of Masterlogist Group Co., Afghanistan).
3. Basic and Detail engineering services for 330/132/33kV New Kano substation, 132/33kV Billiri substation and modification of 132/33kV Gusau substation of TCN in Nigeria (Supreme & Co. Pvt. Ltd., Kolkata, India).
4. Detail engineering services for 63/20kV, 2x10MVA outdoor substation at Franceville, Gabon, West Africa (Gabon Special Economic Zone (GSEZ), Libreville).
5. Basic and Detail Engineering services including Data monitoring system for Reinforcement of 161/33kV Kingtom substation, 33/11kV Wilberforce, Wellington, Ropoti and Blackhall substations under UPGRADE OF FREETOWN PRIMARY DISTRIBUTION NETWORK FOR ENERGY ACCESS PROJECT, MINISTRY OF ENERGY (MOE), SIERRA LEONE (BES Europe Ltd, Middlesex, UK).
6. Detail engineering services including Substation automation system for 132/13.8kV Al Bader GIS substation # 8131 in Riyadh of National Grid, Saudi Arabia, Central (Dar Al Riyadh Consultants, Riyadh).
7. Basic and Detail Engineering services (including SCADA and FO/PLCC communication system) for electrical, civil & structural works of 220/22kV Pule Alam

- Substation, 110/20kV Pushmol and 110/20kV Mainwand Substations of US Army Corps in Afghanistan (Assist Consultants Inc., Afghanistan).
8. Electrical system study (Load flow, Short circuit, Protection coordination, Harmonic analysis), verification and stamping of electrical drawings, Electrical design calculations,
 7. Earthing and Lightning protection system design calculations and layout drawings for 22/0.433kV power distribution system of New Port Project (NPP0064) near Doha in Qatar (Construction Development Company LLC, Qatar).
 8. Independent design verifier for 22/0.415kV Power distribution system for General Cargo Terminal (GCT), Offshore Terminal (OST) and Multiuse Terminal (MUT) of New Port Project in Qatar (On behalf of Transgulf Internatioinal Electro Mechanical WLL, Doha).
 9. Preparation of Sag & Tension calculation of 11kV Overhead lines of ADDC for distribution network expansion for Farms and Ezabs belonging to VIP Customers in Eastern Region of Abu Dhabi (On behalf of ASAS-Satcon JV).
 10. Preparation of 'Engineering Summary' and 'Operation & Maintenance Manual' for 110/20kV Breshnakot Substation in Afghanistan (On behalf of RGM International LLC, Dubai).
 11. Detail engineering, procurement assistance, vendor drawing review, inspection and site supervision services for 132/33 KV new substation of TCN at SONG and 2x132 KV line bay extension at YOLA existing substation (On behalf of Qingdao Wuxiao Group Co. Ltd. & Ahmin Technology & Power Systems Ltd Joint Venture).
 12. Detail Engineering for 132/33kV WUDIL AIS Substation in Nigeria on behalf of Supreme & Co.Pvt. Ltd., Kolkata.
 13. Detail Engineering for 4 nos. 132/33kV AIS Substations at Oghara, Ozoro, Ughelli, Ukwa and 2x132kV Line bay extension at Ughelli power plant in Nigeria on behalf of Supreme & Co.Pvt. Ltd., Kolkata.
 14. Detail Engineering for 2 nos. 132/33kV AIS Substations at Dambatta & Kankara and 2x132kV Line bay extension at Daura existing substation in Nigeria on behalf of Nespak Nigeria Ltd., Nigeria

• **DAR AL RIYADH CONSULTANTS, AL KHOBAR, SAUDI ARABIA**

**Position: Engineer I (Electrical) : Posting : SEC-EOA, HQ, Dammam, KSA
Period: 2000 to 2004**

Projects:

**Posting : Saudi Electricity Company - Eastern Region Branch (SEC-ERB),
Dammam, KSA, as Design Consultant:**

1. 230kV Ibn Zahr GIS switching station, Jubail.
2. 230kV power supply to Jubail United Petrochemical Co. (JUPC), Jubail.
3. 230kV power supply to National Industrial Petrochemical Co. (NIPC), Jubail.
4. 4 X 30 MW (Frame-6) simple cycle combustion gas turbine power plant at Arar.
5. 3 X 30 MW (Frame-6) simple cycle combustion gas turbine power plant at Rafha.
6. 132/33kV GIS substation at Arar and Markaz Zallum.
7. Royal Commission 45BC 115/34.5kV GIS Substation at Jubail.
8. Al-Mazroeyah 69/13.8kV GIS substation, Dammam.
9. Meridien 69kV indoor air insulated substation, Al Khobar.
10. SCADA system modification for 34.5/13.8kV system of Northern Operating Area (NOA) and Hassa Operating Area (HOA).
11. Reinforcement of Al Khobar Al Sahelia 69/13.8kV indoor air insulated substation, Al-Khobar.
12. 69kV underground XLPE cable installation between Rakah BSP and Al Khobar Al Sahelia 69/13.8kV substation, Al-Khobar.
13. 69kV underground XLPE cable installation between Khobar BSP and Khobar Industrial 69/13.8kV substation, Al-Khobar.
14. Reinforcement of Anood 69/13.8kV indoor air insulated substation, Dammam.

Duties and responsibilities:

Preparation of Scope of Work & Technical Specifications, main one line diagrams, relay & metering one line diagrams, indoor/outdoor equipment layouts, cable routing drawings, grounding/ shielding/ lighting layouts, design calculations, HV/EHV schematic drawings, review of base design/detail design drawings and design calculations.

- **DEVELOPMENT CONSULTANTS LTD, KOLKATA, INDIA**

Position: Project Engineer

Period: March 1999 to December 2000

Project:

1 X 30 MW coal fired captive power plant and 132kV switchyard for Bihar Caustic & Chemicals Ltd., Bihar.

Duties and responsibilities:

The job included detail engineering for the power plant and 132kV switchyard for interconnection with Bihar State Electricity Board grid, key one line diagrams, relay & metering one line diagrams, electrical equipment layouts, cable routing drawings, HV/EHV schematic drawings, cable schedules and interconnection diagrams etc.

- **THE KULJIAN CORPORATION, PHILADELPHIA, U.S.A**

Position: Senior Electrical Engineer

Period: September 1998 to April 1999

Projects:

1. 69kV conventional outdoor type main receiving substation for Wyeth Lederle vaccines and Pediatrics in Marietta, Pennsylvania, U.S.A.
2. 1 X 125 MW oil fired EPC power plant for Babcock & Wilcox, Barberton, U.S.A.
3. 3 X 6.1 MW co-generation power plant for the modernization of Central Power Station, Yale University, New Haven, Connecticut, U.S.A.
4. Standard scope of work & technical specifications for Combined Cycle Power Pac (1 X 11.25 MW steam turbine & FT-8 gas turbine) for Turbo Power & Marine System Inc. (Pratt & Whitney).

Duties and responsibilities:

The job included review of vendor drawings, final as-built electrical layouts diagrams, relay metering one line diagrams, , cable routing drawings, HV/EHV schematic drawings, cable schedules and interconnection diagrams, coordination with client & vendors, installation supervision, testing and commissioning activities at site etc.

- **DEVELOPMENT CONSULTANTS LTD, CALCUTTA, INDIA**

Period: August 1989 to September 1998

Position: Project Engineer (1996 - 1998)

CV of Mr. Satyaki Mukherjee

Sr. Design Engineer (1993 - 1996)

Design Engineer (1989 - 1993)

Projects:

1. 2 X 210 MW coal fired Sanjay Gandhi thermal power station (Unit 3 & 4) of MPEB, Madhya Pradesh, India.
2. 2 X 210 MW coal fired Suratgarh thermal power station (Unit 1 & 2) of RSEB, Rajasthan, India.
3. Detail Project Report (DPR) for 220/132/33kV transmission line and substations (GIS type for the new substations and conventional outdoor type for expansion of existing substations) for Ministry of Electricity and Water, Dubai, UAE.
4. Modernization of Bolani Iron ore mines as part of Durgapur Steel Plant Modernization, Orissa, India.
5. Uranium Mining project at Narwapahar, Bihar, India.

Duties and responsibilities:

The job included preparation of detail tender specifications, bill of materials, single line diagrams, control schematics for the 220kV breakers and control & relay panels, relaying & metering single line diagrams, synchronizing schemes, equipment/lighting/grounding/lightning protection layouts, tender evaluation, review of vendor drawings and documents, cable schedule and interconnection, design calculations including equipment rating selection, load flow and fault level calculations using computer software, inspection of type/routine testing at manufacturer's works, coordination with client and vendors.
