

R3 Services



- Retrofit, Refurbishment, Rejuvenation
- Automation service
- Engineering Services
- Training & Assessment service
- Warranty & non warranty service
- Modernisation of HV substation
- Asset Management

S&S Power Switchgear Limited

We help in delivering power to the last person in the line

What is “R3 Services”

“R3 Services” consist of:

- Retrofit
- Refurbishment
- Rejuvenation
- Automation Services
- Engineering services
- Warranty and non warranty services
- Training and assessment
- Modernization of HV substation
- Asset Management

RETROFIT:

Retrofit projects are customized to meet our customer specific requirements. It involves assessing the condition of existing equipment and deciding the components that need to be replaced, modified, reused etc., based on the requirement.

REFURBISHMENT:

Refurbishment refers to repairing old equipment with new available spare materials from the original manufacturer. After repairing the defects it ensures proper function of the equipment.

REJUVENATION:

The action or process of making old equipment's look and performance better or more vital without changing the technology. Rejuvenation is a “tune-up” of an existing service equipment that brings it up to the current electrical safety authority standards.

MODERNIZATION OF HV SUBSTATION

The modernization of high-voltage substations is one of our main directions in which S&S POWER SWITCHGEAR is developing its activities to our deliberate customers.

The special point of our company in dealing with modernization of HV substations is providing by our experience with the assembly, manufacturing of parts, steel support structures and commissioning of high voltage disconnectors.

We offer to our clients:

- Projects design and delivery of equipment.
- Mounting of new HV equipment - disconnectors, circuit breakers. Production and delivery of relevant concrete support structures for them, according to project requirements;
- Laying and connection of new control cables and wiring.

- Mounting and connection of command and control cabinets.
- Electrical measurements, testing and commissioning.
- Refurbishment, renovation, retrofitting and manufacturing and delivery of spare parts.

TRAINING:

We have manufactured more than 50000 disconnectors and switches in medium, high and very high voltage networks worldwide. With more than 45 years of disconnecting and switching know-how, we understand the clients' needs. S&S Power switchgear can offer bespoke training courses to help the staff operate and maintain the switchgear safely, correctly and efficiently. S&S offers specialized designed packages/course modules on the training program, meeting all the industrial standards. S&S also customizes course both on-site and Off-site modules upon specific requirements.

S&S is in service for the past four decades. There are tremendous experience and knowledge in the company. We offer to share this precious treasure with our customers. We offer training to customers through our regular training programmes and also through customized training Programmes, conducted at customers' premises on-site.

ASSESSMENT:

The life of equipment could be well extended if the regular assessment is done on the state of the equipment. We offer assessment services of all equipment by our trained maintenance engineers, Assessment also provides an opportunity for retrofitting and refurbishment.

AUTOMATION SERVICES

S&S power helps in serving automation in four different categories to the people around the world.

- Service station automation.
- Factory automation.
- Distribution automation.
- Process automation.

SUBSTATION AUTOMATION:

S&S Substation automation is the process that works as a supporting system for integrating all domain and functionality tools into various automation layers in order to have unified interface

for all workflows.

Infrastructure, Data, Devices, and Software are the key components of S&S Substation automation.

The benefits that provided by our substation automation are:

- Reduction of Repetitive Tasks.
- Increased Productivity.
- Greater Competitiveness.
- Reduced Response Time.
- Cost Reduction.
- Standardization & Reduction of Failures.

FACTORY AUTOMATION:

S&S Factory automation is incorporated with automation from end-to-end manufacturing processes. The motivation to automate processes has been fundamentally to:

- make more product.
- improve quality.
- reduce direct labor.
- increase flexibility.

we would appreciate an opportunity to put our experience to work for our customers.

DISTRIBUTION AUTOMATION:

S&S power provides services of Distribution automation (DA) by using digital sensors and switches with advanced control and communication technologies.

Reliability of energy supply primarily depends on the distribution network, and its importance is growing. In many cases, explicit power quality criteria are even being included in contracts between customers and utilities. This being the case, power quality is becoming more and more of a focus.

Operators are requiring suitable measures that allow them to acquire information from the distribution network at any time, and thus to control the distribution network more efficiently. Knowing which measures supply which measurable added value for network operation is becoming increasingly important. Our company take all these topics into account and provide all possible functions for fault detection, fault location, and fault correction within a network segment.

PROCESS AUTOMATION:

S&S power use the strategy of process automation technology to organize the personnel and systems through workflows. We implement this process automation in Sales, marketing, production, supply chain, inventory control, administration, and management process.

ENGINEERING SERVICES:

Utilise our design and build capabilities to reduce your overall project time and cost. In addition to manufacturing high quality substation protection and control equipment, Our group company Ac-rastyle can design your systems on your behalf. We have a team of experienced Applications Engineers who are ably supported by our Mechanical and Electrical Engineers, meaning we are able to cater for all your design and build needs". We use the latest AutoCAD 2015 software & can provide drawings & designs in all releases of AutoCAD DWG file in addition to DXF, DWF and Adobe PDF files. Drawings can also be provided for compatibility with other CAD packages on request.

Our design services are supported by our large format scanning capabilities, both on and off site, and also our large format plotting/printing services (up to A0 in colour or B/W).

- Have ability to design the Switchgear from black box stage concept to commercialization.
- Absorbed technology from world-class companies and built over 40 years.
- Use contemporary design software, reputed labs and associate with Universities, international consultants and Private Research Centers.
- Our Lean Innovation Organization leverages consultants and universities.
- Application & Interface Engineering Including Logic and Single Line Diagrams, Protection Configuration, Setting Resistor Calculations, Cabling Diagrams and Schedules.

DCS INTEGRATION:

Including I/O Mapping, Interlock Logic, Screen Designs and Control Philosophy.

DRAWINGS & DIAGRAMS:

- Preparation of Wiring Diagrams,
- Unit Comprehensive and
- Routing Drawings.
- Redraw of legacy drawings
- Generation of diagrams from existing equipment.
- CAD facilities

Mechanical Engineering

Including Bespoke Designs, General Arrangements and Layout Drawings.

Site Survey



Engineering Solutions



Proto Sample



Field Testing



Documentation Completion



Testing of Equipment's



Mass Implementation



Finalizing the Solution



WE ARE HERE TO ESTABLISH OUR NEW SERVICES TO OUR CUSTOMERS AROUND THE WORLD



“Giving A New Life To Your Equipment”

Disconnectors - R3 Services

S&S power offers a full line of disconnectors to help meet many of your application needs with voltage range upto 420KV, current range upto 4000A and these disconnectors are in service worldwide.

To aid our customer, S&S Power has developed the R3 Service for High Voltage Disconnectors. To integrate the outdated technology supply of S&S make or any make products with the currently employed technology to extend the life of the ageing supplies in initially commissioned substations and sites.

R3 OFFERINGS FOR DISCONNECTOR:

- Replacement of old current carrying assembly (Arms)
- Existing old top hampers are replaced.
- Midlife extension.
- Enabling smart drive box.
- Flexible connections are replaced with the improved design of transfer contacts with fingers to maintain consistency in contact resistance
- Replacement of Old Earth Switch.
- Conversion of Mechanical Gang to Electrical Gang of 245kV and 400kV
- Replacement of Existing Tandem pipes and Downpipes.
- Enhancement of mechanical interlocks and accessories for existing Disconnectors.
- Through retrofitting we enhance the Current rating and Short time rating of existing Disconnectors.
- Refurbishment of existing S&S make Disconnector service results in Midlife extension.
- Spare parts and Service work.
- Rejuvenation of S&S makes disconnectors.
- Equipment and component parts of disconnectors.
- Overhaul of disconnectors.

- Training of utility manpower on maintenance and servicing of disconnectors.
- Current level and fault level upgradation requirements.

MODERNIZATION OF HV SUBSTATION MAINTENANCE:

- Site or product assessment.
- Critical spares supply.
- Annual maintenance of contracts.
- Training on site and in factory for all product line.
- Facilitate digitalization of old substation.

SITE ISSUES:

- Non availability of mechanical Interlocks for Main & Earth Switch
- Rusting of old MS Powder coated drive mechanisms
- Rusting of base assembly, connecting pipes and tubes.
- Rusting and hard operation of Disconnectors.
- Aging of current carrying parts. Hotspots and melting portions of current carrying parts.
- High contact resistance & temperature rising issue
-

CUSTOMER BENEFITS:

- Short implementation times for replacement
- Minimum interruptions to service
- Prolongation of remaining service life
- Improved operator protection during operation
- Enhanced operator convenience from remote end
- Minimisation of maintenance and materials costs
- Minimum time and manpower for maintenance
- Extended warranty on the conversion work

| REGION | DISCONNECTOR CHANNEL PARTNER | ADDRESS | LOCATION | NAME | MOBILE No | E-mail ID |
|--------|------------------------------|--|----------|---------------------------|--------------------------|--|
| NORTH | IPPL GLOBAL | T1/113, Assotech Business Cresterra, Plot No. 22, Sector 135, Expressway, Noida, India | NOIDA | Mr. GS Goel | 9893391977 | mail@ipplglobal.com |
| SOUTH | GALAXY MARKETING | Block No.52, majestic colony, Tirupur Kumaran Street, Valasaravakkam, Chennai - 87 | CHENNAI | Mr. Srinivasan | 9282176174 | galaxymktg@gmail.com |
| WEST | SUNIRMAL ENGINEERS | Rane Nagar Rd, Ganesh Colony, Chetana nagar, Rane Nagar, Nashik, Maharashtra 422501 | NASHIK | Mr. Bharatkumar Wagh | 8511734909 | info@sunirmal.com |
| | UNIQUE SALES CORPORATION | 232, Paradise Complex B/H Yashkamal Building Sayajigunj, Vodadara-390020 | GUJARAT | Mr. Jigisha Anilbhai Shah | 9824010781 7227093666 | anilshah13@yahoo.co.in |
| EAST | VINGIRI POWERTECH | 234, Santoshpur Avenue, Santoshpur, Kolkata-700074 | KOLKATTA | Mr. K A Singh | 9433229494 | vingiri.powertech@gmail.com |

| DISCONNECTOR | PROBLEMS FACED | CHALLENGES | SOLUTION PROVIDED |
|--|---|---|---|
| Retrofitting 220 KV CENTRE BREAK DISCONNECTOR at MAPS, Kalpakkam Not able to get spare parts from OEM, since the OEM is not existing. | <ol style="list-style-type: none"> 1. Old Torque bearing arrangement got rusted 2. High contact resistance and High temperature values. 3. Hard & Jerking 4)operation during open / close 4. No Motor operation. Only manual. | <ol style="list-style-type: none"> 1. 35 years old Disconnector 2. Current carrying parts and drive mechanism need to be replaced with S&S Spares 3. Replacement within stipulated time period | Disconnector Current carrying parts and Motor operating mechanism designed and Manufactured accordingly to match terminal connection and Mounting position. |
| Retrofitting 420 KV CENTRE BREAK DISCONNECTOR at PGCIL, KADAPA | <ol style="list-style-type: none"> 1. Main contacts Damage / Hot spot pits and Burns 2. Ageing of contacts | <ol style="list-style-type: none"> 1)Disconnector Live parts changed matching the existing Terminal connectors 2)Manufacture and Deliver within stipulated time frame | Live parts changed without changing the Terminal connectors and bus bars |
| Retrofitting 420 KV PANTOGRAPH DISCONNECTOR at Neyveli lignite corporation limited | <ol style="list-style-type: none"> 1. Not able to operate the switch 2. Failure of gear box 3. Breakage of Operating rod isolators | <ol style="list-style-type: none"> 1. Disconnector fixing Without change in existing structure and insulator 2. Matching the Drive box fixing position as per structure suitability | 1)Complete set of isolator replacement along with Drive box Fixed contact replaced with copper tube and 'L' bracket. |
| Retrofitting 220 KV CENTRE BREAK & DOUBLE BREAK DISCONNECTOR at JSW Energy | <ol style="list-style-type: none"> 1. Centre break – Main contact damage/Hot spot pits and Burns 2. Double break – Moving blade & Extrusion got hot pits and burns, Insufficient Contact Pressure. 3. Difficulties in turn and twist operations & Hard Operation . | S&S were tasked to replacing the old ELPRO & SMC make current carrying parts Without change in terminal pad and Connectors Manufacture and Deliver within time-frame and budget | S&S Disconnectors were designed & manufactured to match existing mounting position and terminal connection. |

REFERENCES:

- PGCIL, KOLAR – Upgradation of 420kV 2000A to 3150A Disconnector -Existing Siemens make
- PGCIL, KADAPA – Upgradation of 420kV, 2000A Disconnector - Existing ELPRO Make.
- NLC, Neyveli – Upgradation of 420kV 2000A Pantograph - Existing Siemens Make
- JSW, Bellary – 220kV Double and Centre break Disconnector– Existing ELPRO & SMC Make.
- MAPS, Kalpakkam – 220kV Centre break Disconnector – Existing TMG Make.
- BPCL, Bhutan – 220kV Centre Break Disconnector – Existing SMC Make with S&S Make

Disconnectors - Case Studies

1. [RETROFITTING 420KV CENTRE BREAK DISCONNECTOR, DELHI TRANSMISSION LTD BAWAN](#)
2. [RETROFITTING 145KV DOUBLE BREAK DISCONNECTOR,LANCO INFRATECH UDIPI INDIA](#)
3. [RETROFITTING 230KV CENTRE BREAK DISCONNECTOR,GETCO KADANA](#)
4. [RETROFITTING 420KV & 220KV DOUBLE BREAK & CENTRE BREAK DISCONNECTOR PGCIL MALERKOTLA](#)
5. [RETROFITTING 132KV CENTRE BREAK DISCONNECTOR,TENAGA NASIONAL MALAYSIA](#)
6. [RETROFITTING 145KV DOUBLE BREAK DISCONNECTOR,AMBUJA CEMENTS LIMITED PUNJAB](#)
7. [RETROFITTING 420KV CENTRE BREAK DISCONNECTOR, PGCIL HYDERABAD](#)
8. [RETROFITTING 420KV PANTOGRAPH & CENTRE BREAK DISCONNECTOR,PGCIL VINDHYACHAL](#)
9. [RETROFITTING 420KV PANTOGRAPH DISCONNECTOR,NEYVELI LIGNITE CORPORATION LIMITED](#)
10. [RETROFITTING 420KV 2000A CENTRE BREAK DISCONNECTOR,PGCIL KOLAR](#)
11. [RETROFITTING 245KV PANTOGRAPH & 245KV CENTRE BREAK DISCONNECTOR,THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED BAKRESHWAR](#)
12. [RETROFITTING 145KVDOUBLE BREAK DISCONNECTOR,SALTHOLME UK](#)
13. [RETROFITTING 145KV CENTRE BREAK DISCONNECTOR,NTPC-SAIL](#)
14. [RETROFITTING 420KV 2000A CENTRE BREAK DISCONNECTOR,PGCIL INDORE](#)
15. [RETROFITTING 145KV CENTRE BREAK DISCONNECTOR,STEEL AUTHORITY OF INDIA LIMITED BHILAI](#)
16. [RETROFITTING 420KV 2000A CENTRE BREAK DISCONNECTOR,PGCIL KADAPA](#)
17. [RETROFITTING 132KV DOUBLE BREAK DISCONNECTOR,NUCLEAR FUEL COMPLEX HYDERABAD](#)
18. [RETROFITTING 220KV CENTRE BREAK DISCONNECTOR,BPC-SEMTOKHA SUBSTATION BHUTAN](#)
19. [RETROFITTING 220KV DOUBLE BREAK & CENTRE BREAK DISCONNECTOR,JSW ENERGY TORANAGALLU](#)
20. [RETROFITTING 220KV CENTRE BREAK DISCONNECTOR,MAPS KALPAKKAM.](#)

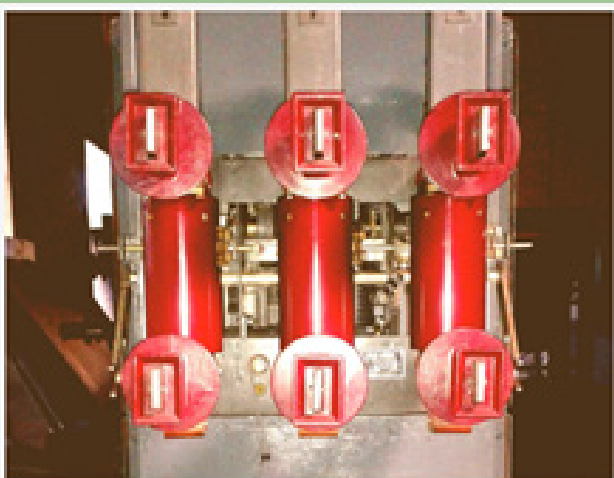
MV Circuit Breakers - R3 Services

We specialize in providing complete design, build and project management of medium Voltage Indoor and Outdoor VCBs and Retrofit solutions for electrical distribution power systems. Since 1975, we have earned a unique reputation for product quality, technical expertise and excellent customer service. Currently focused on Retrofit & Service Offerings and special projects.

Fully certified to:

- ISO 9001
- ISO 14001
- ISO 45001

S&S Power has been designing, manufacturing and installing vacuum retrofit circuit breakers (and conducting switchgear refurbishments) for more than 25 years and is considered a specialist in this field. Through our extensive experience, S&S Power have developed methods to combat aging equipment by utilizing modern manufacturing methods, paired with cutting edge 3D printing techniques.



CIRCUIT BREAKER RETROFIT SOLUTIONS

S&S Powers offers 2 lines of circuit breakers :

1. INDOOR VACUUM CB

2. OUTDOOR VACUUM CB

With voltage range up to 36kv, current range up to 2000A

R3 services in VCB (Retrofitting, Refurbishment, Rejuvenation)

Retrofit activities involve rehabilitation of aged breakers into modern units satisfying client's cubicle requirements through proper assembling & installing.



OFFERINGS:

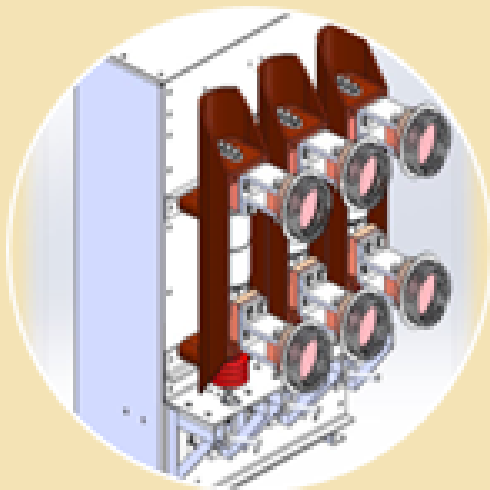
- Improved insulated frame with Superior anti-tracking characteristics & Mechanical Strength.
- Reduction in number of parts (50% of that of previous model).
- High Mechanical & Electrical life compare with aged CB.
- Retrofit Electromechanical relays to Numerical relays.
- Upgrade Panel by Close Door Operation Safety KIT.
- Servicing of existing component in Panel Chambers such as CT, CABLE and vermin proofing.
- Increased the current carrying capacity of BUSBAR and VCB..
- Replace Air, Oil, SF6 by Vacuum Truck / Cassette.
- MV component replacement in panel.
- Other makes Outdoor pole retrofit in outdoor.
- Other makes mechanism retrofit in outdoor.

Advantages of Retrofit Vacuum Circuit Breakers:

- Significant reduction in time and resources

needed for planning, compared with complete switchboard

- replacement
- Considerable overall cost savings compared with switchboard replacement
- Enables a phased replacement, spreading cost over a number of years
- Reduced site disruption
- Installation involves no civil work
- Removal of oil from the substation reduces the risk of fire and explosion, which leads to lower insurance
- premiums
- Increased operating reliability and reduced maintenance costs
- No need to disturb or replace HV cables
- Can be operated remotely
- Suitable for frequent switching duties
- Replaces the dangerous and environmentally-damaging SF6 gas
- Significantly extends the service life of the fixed housing
- Contributes to company environmental sustainability policy and reduces carbon footprint through the better use
- of natural resources and a reduction in raw materials



ENGINEERING DESIGN SERVICES:

- Our groups of company give us a strong backup in engineering design services.
- Our company has a pool of qualified and experience engineers, offers application engineering and circuit design, single line, logic, inter locking diagram preparations, general arrangement and equipment specifications, wiring, terminal block layouts and cable wiring diagrams.
- We offer R3 engineering services globally

CLIENTS OFFERED WITH FOLLOWING ENGINEERING SERVICES:

- ABB- INDIA
- ABB-UK
- ALSTOM-DUBAI
- GE-SAUDI ARABIA
- REYROLLE-UK
- RLF-UK
- SIEMENS-INDIA
- SIEMENS-UK
- VaTECH-UK



MODERNIZATION OF HV SUBSTATION MAINTENANCE:

- Site or product assessment.
- Critical spares supply.
- Annual maintenance of contracts.
- Training on site and in factory for all product line.
- Facilitate digitalization of old substation.
- R3 of DS, CB, CRP or other substation equipment.

BENEFITS:

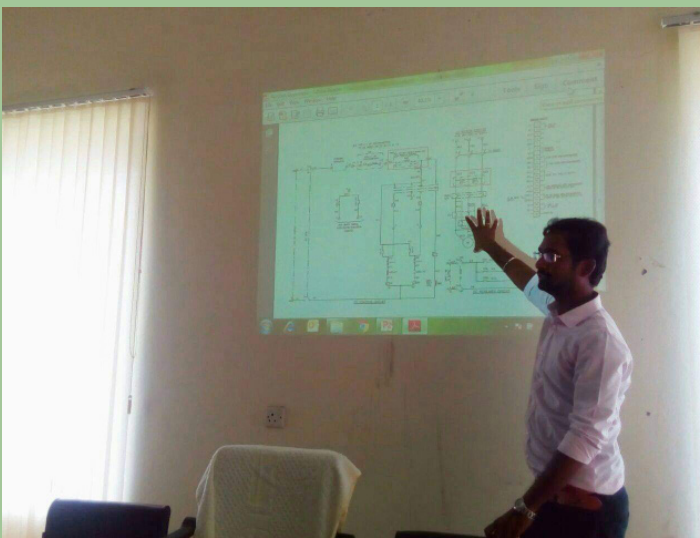
- Increased operating reliability and safety.
- Enhanced short circuit ratings available.
- Saving on CAPEX by renewing only the worn-out parts while benefiting from new technologies.
- OPEX was reduced due to the modern maintenance free S&S Power VCB.
- Increased personnel safety:
 1. Mitigate risks of electrical flash fatalities.
 2. Mitigate risks of power outages resulting in dangerous accidents.
- 10 years of maintenance-free operation.

- Reduced maintenance and environmental impact.
- Elimination of hazardous materials such as asbestos
- Decreased insurance costs due to absence of oil
- VCB can be easily installed in any switchgear panel type. Environment friendly.
- High operational speed with SF6-free vacuum circuit breakers.
- The fastest VCB on the market with Opening/ Closing time of 35(12^{*})/60(24^{*}) ms Long life and high reliability VCBs:
 1. 10 000 close-open cycles.
 2. Service life can be extended by up to 30 years



REFERENCES:

- HPSEB- Repair/Overhauling & Service of 33kV VCB for existing S&S make VCBs
- IGCAR, Kalpakkam – Retrofitting of Jyothi existing Indoor NGEF MOCB to New 12kV, 1250A, 25KA/3 Sec of S&S VCBs.
- KSEB- Spares supplied to existing 11kV indoor VCB
- Nuclear Fuel Complex- Servicing of HT Gas Circuit Breaker
- ONGC, Ahmedabad- Retrofitting & Repair of 12kV VCB and supplied Spares to 12kV VCB
- ONGC, Assam – Retrofit, Spares and services for existing S&S Make VCBs.
- MAPS Kalpakkam – Retrofitting of HBB ABCB to S&S VCB Indoor Type – 6.6KV, 2500A , 40KA/3 Sec.
- Retrofitting of CFL SF6 to S&S VCB Indoor Type – 7.2KV, 2500A, 40KA/3Sec.
- Replacement of existing HG36 with new OFVP36.
- APEPDCL VIZAG – retrofit of 12KV outdoor ABB mechanism with S&S mechanism.
- APEPDCL VIZAG – Retrofitting spares of various make’s 11KV & 33KV outdoor VCB poles(one to one replacement).



Benefits over Replacing Complete Switchboards:

- Significant overall cost saving
- Minimal disruption to site and supply
- No need to disturb or replace HV cables.

| | | | | |
|--|---|--|--|--|
|  <p>Replace AIR, OIL, SF6 by Vacuum Truck/ Cassette</p> |  <p>Upgrade Panel by Close Door Operation Safety KIT</p> |  <p>Servicing of existing component in panel chambers such as CT, Cable etc and vermin proofing</p> |  <p>Increase the current carrying capacity of BUSBAR & VCB</p> |  <p>Retrofit electromechanical relays by Numerical Relays</p> |
|--|---|--|--|--|

| Particulars | Problem Faced | Challenges Faced | Solution Provided |
|-------------|---|---|---|
| MOCB TO VCB | <ul style="list-style-type: none"> • Increase in number of accidents. • Increase in number of maintenance work. • Increase of damage due to power failure. | <ul style="list-style-type: none"> • Deterioration. • Increase in the maintenance cost. • No spare parts are available. • Introduction of new information system. | <ul style="list-style-type: none"> • Improvement in reliability of power supply. • Saving of running cost, maintenance work and duration. • Prevention of power failure accidents by adopting a communication network. • Minimum or no down time. |



| REGION | CIRCUIT BREAKER CHANNEL PARTNER | ADDRESS | LOCATION | NAME | MOBILE No | E-mail ID |
|--------|---------------------------------|---|-----------|----------------------|------------|--|
| NORTH | IPPL GLOBAL | T1/113, Assotech Business Cresterra, Plot No. 22, Sector 135, Expressway, Noida, India | NOIDA | Mr. GS Goel | 9893391977 | mail@ipplglobal.com |
| | STERLING SYSTEMS | Sterling System & Controls, S-35, Chambal Industrial Area, Oppo. Multimetals Ltd. Near Punjab Electrical, Kota (Raj.) India-324003. | KOTA | Mr. Puneet Gupta | 9929410118 | sterlingkota@gmail.com |
| | CONSULTANT | 2524A/Oblique sector - 3, Ballabgarh, Faridabad, Haryana - 121005 | FARIDABAD | Mr. Mohan Singh Bist | 7358274111 | msb@sspower.com |
| SOUTH | GALAXY MARKETING | Block No. 52, majestic colony, Tirupur Kumaran Street, Valasaravakkam, Chennai - 87 | CHENNAI | Mr. Srinivasan | 9282176174 | galaxymktg@gmail.com |
| | INEL POWER | New, No. 103, Dharuman St, West Jaffer Khanpet, Chennai, Tamil Nadu 600083 | CHENNAI | Mr. Rajendra Prasad | 9841055783 | hyderabad@inelpse.com |
| | BRINDA ELECTRICALS | 112, Sri Colony (West), 3rd Street, Neredmet Cross | HYDERABAD | Mr. Srikanth | 9848131584 | brindahyd@gmail.com |
| WEST | SUNIRMAL ENGINEERS | Rane Nagar Rd, Ganesh Colony, Chetana nagar, Rane Nagar, Nashik, Maharashtra 422501 | NASHIK | Mr. Bharatkumar Wagh | 8511734909 | info@sunirmal.com |
| | KK SALES CORPORATION | 220, Paradise Complex, Behind Yashkamal Building | VADODARA | Mr. I. K. Pandya | 9824076410 | kksc39@gmail.com |
| EAST | VINGIRI POWERTECH | 234, Santoshpur Avenue, Santoshpur, Kolkata-700075 | KOLKATTA | Mr. K A Singh | 9433229494 | vingiri.powertech@gmail.com |
| | CONSULTANT | Kolkatta | KOLKATTA | Mr. Naba Das | 9748743693 | naba.das65@yahoo.co |



MV Circuit Breakers - Case Studies

1. [RETROFITTING OF NGEF MOCB TO S&S VCB INDOOR TYPE-12KV, 630A, 25KA /3 SEC – AT IGCAR KALPAKKAM](#)
2. [RETROFITTING OF JYOTI MOCB TO S&S VCB INDOOR TYPE-12KV,1250A, 25KA/ 3 SEC – AT IGCAR KALPAKKAM](#)
3. [RETROFITTING OF HBB ABCB TO S&S VCB INDOOR TYPE-6.6KV, 2500A, 40KA/3 SEC – AT MAPS KALPAKKAM](#)
4. [RETROFITTING OF CGL SF6 TO S&S VCB INDOOR TYPE-7.2KV,2500A,40KA/3 SEC](#)
5. [RETROFIT OF 12KV OUTDOOR ABB MECHANISM WITH S&S MECHANISM – AT APEPDCL VIZAG](#)



Automation - R3 Services

OFFERINGS :

- Relay commissioning and testing
- Relay coordination
- Protection architect consultancy
- Power system automation service
- Industrial Automation services
- Machine automation service
- Factory automation in LV side of electricity delivery
- Protection design services
- Engineering services

Retrofit, Refurbishment, Rejuvenation:

We offer retrofit of all types of Protective Relays by completely re-working the Protection Schemes, aesthetically re-designing the panel layout, re-wiring, testing, and commissioning.

Automation Services:

With our vast experience in Automation, we offer innovative solutions for Industrial applications by offering PLC based automation systems to effectively automate and control the process to increase the efficiency of the system. Our services include an in-depth study of the system, assessment of the present system, engineering the new desired Automation System, implementation of the new automation system, programming, testing, and commissioning.

We are also working together with M/S Schneider Electric for Automation Systems.

Engineering services:

Our dedicated team of engineers with an enormous amount of hands-on experience in the field of Protection, Control, and Automation has the capability to completely do the engineering of complex Control and Automation Systems. Our designs offer world-class time-tested solutions following International standards for design and quality.



Warranty and non-warranty services:

We take up Annual Maintenance Contracts for Control and Automation Services. Routine testing of Relays, Calibration, and certification can be undertaken. We also offer hot-stand-by inventory of spares to cater to the emergency breakdown requirements. Our trained engineers swiftly respond to the maintenance calls and resolve the issues effectively at the earliest.



Training and assessment:

Customers can immensely benefit by training their engineers in the Engineering, Scheme designs, Operation, and maintenance of Control and Automation Systems. Our training modules designed with content from decades of field experience and delivered by trained engineers offer tremendous value. We also offer customized on-site training programs for our customers at their premises with training programmes customized for their specific requirements



Modernization of HV substation:

The modernization of high-voltage substations is one of our main directions.

We offer to our clients:

- Projects design and delivery of equipment.
- Mounting of new HV equipment – disconnectors, circuit breakers. Production and delivery of relevant concrete support structures for them, according to project requirements;
- Laying and connection of new control cables and wiring.
- Mounting and connection of command and control cabinets.
- Electrical measurements, testing and commissioning.
- Refurbishment, renovation, retrofitting and manufacturing and delivery of spare parts for minimum oil high voltage breakers type MMO 110 kV.

Our network of Service Partners provides complete capability of all activities for HV Substation modernization. We offer engineering, execution, installation and commissioning of all systems involved in the modernization of the HV Substations.

Our present Service Network for Modernisation of HV Substations includes:

Southern Region:

INEL Power System Engineers (P) Ltd

103, Dharuman Street, Jafferkhanpet, Chennai - 600083, TamilNadu, India.

<https://www.inelpse.com/>

Central Region:

Sunirmal Engineers

Rane Nagar Rd, Ganesh Colony,

Chetana nagar, Rane Nagar,

Nashik, Maharashtra 422501

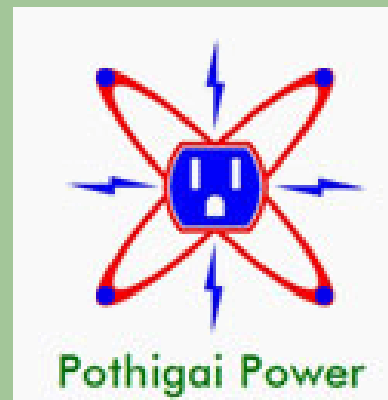
Northern Region:

Sterling System & Controls, S-35,

Chambal Industrial Area,

Oppo. Multimetals Ltd. Near Punjab Electrical, Kota (Raj.) India-324003.

Our Automation Service Partner:



Pothigai Power Solutions Pvt Ltd.,

3C, Pothigai Road, Gandhi Nagar,

Urapakkam, Chennai - 603 210

<http://www.pothigai-power.com>



Why S&S ?

ABOUT US:

S&S Power Switchgear Ltd (S&S) was established in 1975 in Technical collaboration with Brush Fusegear, UK for manufacture of Fuses. S&S introduced High Voltage Disconnecting Switches in 1978 collaborating with Southwales, UK. S&S indigenously developed Outdoor Porcelain Clad Vacuum Circuit Breaker and introduced for the first time in Indian market. S&S became the industry leader in the country in sales and market shares in the Medium Voltage and High Voltage Disconnecter Industry. The factory has state-of-the-art manufacturing facilities to produce high quality equipment. A world class Factory in Puducherry houses all third generation equipment and provides low cost high quality manufacturing facility for Disconnectors.

The products of S&S have been tested in internationally renowned Laboratories- Kema Holland, CESI-Italy, and CERDA, France. The type test conducted includes Ice Breaking test. Special test conducted for High Altitude installation of these Disconnectors. S&S continues its success march backed by a strong team of quality Engineers and a fully equipped in house Research and Development department.

OUR COMPANY:

S&S is the only company in India to have sold more than 18,000 nos of Circuit Breakers and more than 25,000 nos of Disconnectors to all major Utilities in India and Worldwide. Repeated orders from esteemed customers prove their confidence reposed on S&S products and timely delivery.

S&S continues its thrust and introduces a wide range of products to meet the customer's changing needs which are their core strength in staying ahead successfully in the competitive market. Careful selection of automatic and semi automatic machines enables S&S to manufacture quality products

WHY US:

- Quality products and services.
- Timely execution of projects.
- Complete after sales services.
- Provide customized solutions.
- Flexibility to adapt to customer needs.
- Long term experience in disconnectors.
- Regular upgradation of services.

CORE VALUES:

- Committed to achieve success focusing on customer satisfaction.
- Delivering value.
- Excellence in operations.
- Provision of suitable platform for best electrical deals.
- Quality focused team.

VISION:

To be recognized as preferred Switchgear & P&C Solutions Company to our partners.

MEASURED BY;

1. Customers say: " We want to do more business with S&S Power."
2. Shareholders say: " S & S Power is one of my best investments."
3. Employees say: " I am proud to be a part of S&S Power."
4. Suppliers Say: " S&S Power is one of our most valued customers."
5. Public Authorities say: " S&S Power is Compliant & Responsible."

MISSION:

- Transform into a best cost business model creating social impacts.
- Achieve significant market share in target markets with commercial intensity, alliance & service focus.
- Expand specific products portfolio for target market and secure high revenue per product.
- Modernize management practice, its tools, manufacturing technology & systems, innovation tools and talent development programs.
- Grow 3X+ with double digit profit and positive cash in five years.

CERTIFICATIONS OF OUR COMPANIES:

- ◇ ACRASTYLE POWER (INDIA) LIMITED has been certified by the body of TAV SUD South Asia Private limited has implemented a quality management system in accordance with ISO 9001:2015 for the scope of :
- ◇ Engineering design and manufacturing of control, relay and protection solutions and LV/MV Switchgear for generation, transmission & distribution in the power sector.
- ◇ S&S POWER SWITCHGEAR EQUIPMENT LIMITED(PUDUCHERRY) has been certified by the body of TUV SUD South Asia Private limited has implemented a quality management system in accordance with ISO 9001:2015 for the scope of :
- ◇ Manufacturer of High Voltage Disconnecting switches from 33KV to 800KV with and without earth switch.
- ◇ S&S POWER SWITCHGEAR EQUIPMENT LIMITED(CHENNAI) has been certified by the body of TAV SUD South Asia Private limited has implemented a quality management system in accordance with ISO 9001:2015 for the scope of :
- ◇ Design of High Voltage Disconnecting switches from 33KV to 800KV with and without earth switch.
- ◇ S&S POWER SWITCHGEAR LIMITED has been certified by the body of TAV SUD South Asia Private limited has implemented a quality management system in accordance with ISO 9001:2015 for the scope of :
- ◇ Engineering Design, Manufacturing and sales of indoor/outdoor MV Switchgear from 3.3KV to 36KV.
- ◇ ACRASTYLE POWER (INDIA) LIMITED has been certified by the body of TAV SUD South Asia Private limited has implemented a quality management system in accordance with ISO 9001:2015 for the scope of :
- ◇ Engineering Design and Manufacturing of control, relay and protection solutions and LV/MV Switchgear for generation, Transmission & Distribution in power sector.
- ◇ S&S Power is the only disconnecter manufacturing company certified by ENA (Energy Network Association)

Our Addresses:

S&S Power Switchgear Limited

Regd. Office & Works:
Plot No:14, CMDA Industrial Area-II,
Chithamanur Village,
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Kancheepuram-Dist,
Tamil Nadu, India
Tel: 044 47431625
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Fax :+44-1229-582586
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S&S Power Switchgear Equipment Limited

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