

CS²



e=CS²
Newsletter
Issue IV
July-Dec. '08

nationwide customer-oriented and quality-obsessed team of more than 3600 people.

C&S Electric is active in area of low voltage switchgear, power busbars, protection and control lighting and wiring accessories, medium voltage switchgear, diesel generating sets. EPC contracts, in addition to interests in electrical rotating machines, termination technologies and industrial mail order.

As Controls & Switchgear restructures and renames itself to C&S Electric Ltd. rise further with our country's bright future in the global economy, we are resolved to carry forward the values that brought us so far and complement them with the company vision and mission for the future.

Landmark Merger

We are pleased to announce the amalgamation of Controls & Switchgear Co. Ltd. and its two subsidiaries Controls & Switchgear Contactors Ltd. (TC) and C&S Protection and Control Ltd. (CSPC) into a single consolidated entity.

As a consequence of this amalgamation, the consolidated entity also includes all 100% owned subsidiaries and complimentary joint ventures.

The name of this new entity is **C&S Electric Ltd.**

C&S Electric products are used worldwide in systems for power generation, transmission, distribution and final consumption.

The formation of C&S Electric marks the formal birth of leading Indian power equipments manufacturer

in terms of revenues, business performance, market shares, range of products, size of infrastructure, number of employees, annual R&D budgets and volume of exports.

"The merger will bring in further scale, strength and synergy, for the benefit of all stakeholders."

More than 40 years ago, Controls & Switchgear Company Ltd. was formed with a dream and determination to bring to Indian industry the world's finest electrical products and technologies.

Today, dream has transformed into 16 world class manufacturing facilities, successful joint ventures with world technology leaders, path-breaking indigenous R&D efforts, exports of our Indian products to more than 73 countries worldwide and a

OUR NEW IDENTITY



We touch your electricity everyday!

We thank all our customers, business associates and well wishers for their support during this long journey and we look forward to your support in future.

Busbar Trunking System is now ASTA certified for IP-67

In our quest to provide excellent product quality to our customers, our Busbar Trunking System is now ASTA certified for Ingress Protection IP67.

The type test was carried out at Electrical Research & Development Association (ERDA), Vadodara in December 2008.



All the test arrangements were made as per the guidelines given in IEC 60529, IEC 60439-2 (Ed 3.1): 2005 10 & BSEN 60439-2 incorporating amendment 1:2006.

This is a benchmark certification for our Busbar Trunking System which enables us to serve our customers with different degree of dust and water protection, apart from meeting international standards.

PRIMO- Modular Switches

Primo Range, the newly launched economic range of Modular switches has received excellent response from the market. Primo range has received approval from a no. of Architects, Consultants & Contractors. Initial orders have been booked for Primo from all across the country.

Primo range is a complete range, ensuring safety, comfort & aesthetics. Primo range is available in white color only.

This range is very much compatible with the existing market boxes & has several unique features, as follows:



- Plates with night time locator strip
- Silver contacts for high conductivity & long life
- Spring loaded socket contacts for secure connections
- Hum-free fan regulators
- 25A switch sockets for air-conditioners & geysers
- Neon based red indicator
- Wide range of modular accessories

Blended Highbay - Industrial Lighting

In its continuous endeavor to provide solution based products to customers with latest technology & high aesthetics, C&S LWA has launched new product in its Luminaire range.

C&S has launched the new blended highbay. It will help in achieving very high lux level & can be installed at very high height. The new fixture, very easy to maintain with various mounting options, has following unique features:-

- High Photometric performance
- No complete darkness during "Hot re-striking" of Metal Halide lamps.
- Very good color rendering.
- Easy maintenance
- Various mounting options-by hook, direct bolting on truss or hanging by chain



- Ideal for high structures
- Wattage up to 2X400W
- Detachable Control gear tray
- Different position of lamp possible to achieve different photometries
- IP 20 to IP 65 version Application
- Manufacturing & assembly plants
- Power Station & Steel Plants
- Warehouses
- Fabrication Shops

AMF & Engine Control Relay Type - EC2 PLUS

EC2 PLUS is designed for the control of emergency and standby power systems. It integrates the functions of engine start relay, engine and alternator supervision & annunciator. The relay measures and displays various electrical parameters and has a user friendly MMI in the form of a keypad and a LCD display.

EC2 PLUS measures and displays various parameters like voltages, currents, power factors, active power consumed in all the three phases. It also measures the energy consumed by the load and records start and stop times of the generator. The display of month-wise energy consumption is available.

EC2 PLUS provides the overload protection and the permissible overload limit can be selected on the relay. The actual load current is displayed by

selecting the actual CT ratio used for the purpose of measurement.

The relay has excellent communication features including GPRS and SMS connectivity through Modem and any fault event thus can be immediately conveyed to the base station or to the concerned persons.



General Features

- Micro controller technology
- Wide range of auxiliary supply: 7V to 35V DC
- Withstands a dip to 0V of auxiliary supply for 1 second
- 20ch X 4-lines Alphanumeric LCD display with keypad for ease of operation
- LED indications to show the status of various parameters
- Isolated inputs and outputs
- Flush Mounting

Engine Guard, Type - eGuard



The Engine Guard, type eGuard, protects the engine under fault conditions like high coolant temperature, low lubricating oil pressure, over speed, under speed etc by automatically stopping the engine or by preventing the start operation if such conditions are noticed before start.

Safety of the Engine

Engine is stopped when at least one of the following condition is met.

Switch is turned to OFF position or any of the following faults occur: HWT, LOP, LFL, SPEEDHI and SPEEDLO or External Stop input is activated or Remote Stop is activated.

power march

harvesting orders over
MINR 1,500 in July-Dec.'08
from power sector



Partial List of Major Orders (July-Dec. 2008)

S.No.	Client	Equipment	Project	Order value MINR (Appx.)
1	Lanco Infra Tech Ltd., Gurgaon	LV Switchgear Package	Kondapalli 365 MW Power Project	230
2	NTPC Tamil Nadu Energy Co. Ltd	Insulated Phase Busduct/ Segregated Phase Busduct	Vallur Thermal Power Plant	170
3	BHEL, Noida	LV Switchgear, Busduct Package	Sikka Thermal Power Project 2 X 250 MW	120
4	BHEL, Ranipet	LT MSB Panels & Spares	DVC Meja Project	100
5	JSW, Delhi	Insulated Phase Busduct/ Segregated Phase Busduct	2x135MW CPP, Raigarh	80
6	ABB LTD, Faridabad	LV Switchgear Package	JSW Phase - II Project	70
7	Alstom Porjects, Vadodara	LV Switchgear Package	NHPC Uri II Hydroelectric Project	70
8	Alstom, France	Insulated Phase Busduct	Bujagali Hydroelectric Power Project	60
9	L&T ECC, Chennai	Segregated Phase Busduct / Non Segregated Phase Busduct	Brahmani Industries Ltd	50
10	Vifer Electric, Spain	Insulated Phase Busduct	ABENGOA, ISCC Ain Beni Mathar	50
11	BHEL, Hyderabad	Generator Auxiliary Compartment	IER - Dubai	50

India's First Single Phase DOL Starter

(With Magnetic Contactor)

Benefits

- Aesthetically Smart enclosure
- Power Rating 0, 5-3HP, 220V AC
- 2P Magnetic Contactor, 20 & 25A, AC3 Duty
- 2P Overload type LR7, Range 4-25A
- No-Volt operating range 160-260V AC.
- Electrical life 1 - Million operations
- Large Terminal Capacity
- Integrated "ON" / "OFF" Push Buttons

Applications

- Domestic Pump Sets
- Mixers & Grinders
- Garage Compressors
- Industrial Fans
- Floor Polishers
- Industrial Sewing Machines
- Machine Tools
- Deep Freezers & Air-Conditioners



WiNtrip RCCB

We take immense pleasure to announce launch of C&S WiNtrip Residual Current Circuit Breaker (RCCB), another state-of-the-art product essentially required for Residential, Commercial & Industrial applications.

The device is used for protection against leakage current(s) with 30, 100 & 300mA Rated Residual Current and is available in 2 & 4 pole versions for single & three phase applications in 25, 40 & 63A Rated Current. It automatically measures and disconnects the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity. Few of the exclusive salient features are mentioned hereunder :

- 35 mm Din Rail Mounting
- Dual termination possible for cable and comb type Bus-Bar
- Finger Protected Terminals (IP-20)
- Min. Service Voltage 2P-100V, 4P-190V AC
- Terminals conducive for 35mm2 rigid cable



- Operating Temperature -5 to +60
- Load/Line Reversibility applicable
- Short Circuit Capacity 10kA



- Easy Pad Locking facility
- Built in Filtering Device for preventing nuisance tripping due to transient voltage
- 5 Newton Terminal Screw torque at both top and bottom
- Fire resistant parts to withstand abnormal heating and impact
- Endurance Mechanical 20000 & Electrical 10000 operations

2-Pole Contactor, AC220

Benefits

- Aesthetically Superior
- Common frame size, 4 different ratings options
- Offers more power per pole
- Provision of Din Rail Mounting facility
- Optional Snap - Fit Top Mounted Auxiliary Block
- Low Sealed VA consumption, saves energy
- Dual Rated Coil 220 / 240V AC has operating range 160-260V
- Electrical Life 1-Million operations



Applications

- Agri Segment OEMs
- Pump Panel Manufacturers
- Machine Tool OEMs
- X-Ray Machines
- Heater Control / Temperature Controller
- Welding Control
- Air Conditioners / Deep Freezers
- Changeover Controls in Buildings
- UPS / Stabilizers

new heights

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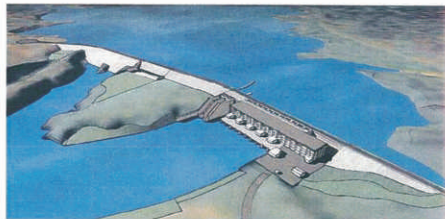
C&S Expanded its footprint in Uganda

Uganda



Recognizing C&S Electric's capabilities and strengths in terms of excellent quality, timely deliveries and consistent performance, Alstom Power Systems, France has awarded a prestigious order for supply of Isolated Phase Busducts for Bujagali Hydroelectric Power Project, which is a 250-megawatt power-generating facility on the Victoria Nile River near the Town of Jinja, in Uganda, by Bujagali Energy Limited. The project is downstream from the Nalubaale-Kiiera dam on the river Nile and involves construction of a 28m high dam.

C&S has the best record for supplying IPBs for hydro sector & has supplied to numerous projects including India, its largest Subsantini Hydro Electric Project. Uganda has an acute shortage of electricity, which is negatively affecting the nation's economy and the well-being of its citizens. The project will preserve the environment while producing substantial benefits for Uganda, including:



- Increased electricity supply
- Lower electricity costs
- Improved air quality
- Jobs for Ugandan workers
- Improvements for villages located nearby

The Bujagali Hydropower Project will comply with strict environmental and other regulatory requirements. The project was approved by the Ugandan government, The World Bank Group and other potential lenders in April 2007, and is under construction.



Mount Kadam

Going global Abu Dhabi Exhibition

Abu Dhabi



C&S participated in Power Generation & Water Middle East Exhibition which was held at National Exhibition Centre, Abu Dhabi from 26th to 28th October 2008. This is the first show of its kind in the capital of UAE. With traditional markets firmly in the grip of the current global economic recession, the major players in the power like C&S sought new opportunities and emerging markets in Abu Dhabi.

The show has been really busy. We were very pleased to have had the opportunity to be there to showcase our exclusively product range wherein we not only received overwhelming response from the customers but it also helped in increasing C&S brand image abroad to make us global players in the field of power generation, distribution, control, protection and final consumption.

Russian Construction Industry appreciates C&S bustrunking

Russia

Yet another feather added to our CMD's cap by having been conferred Medal of Honour by the Russian Association of Construction Industry in appreciation of his contribution in supplying high quality Bustrunking System meeting stringent Russian Standards.



expanding frontiers



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C&S Efacec is ready to roll out



The dual objective of this JV will be to address the growing Indian market for medium voltage switchgear and exclusively supply components and assemblies to the global medium voltage subsidiaries of EFACEC group.

This venture will cater to the market for primary & secondary medium voltage switchgear in India by providing products for primary distribution segment which will be used in power-plants and heavy industries. Secondary distribution products will also be used in the distribution network and in light industry and commercial real estate.

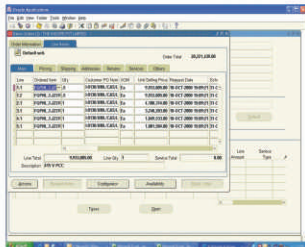
The area occupied by these operations will be around 4000sqm, to begin with, with an expected sales turnover of MINR 2,000 by the fourth year. The commercial production activities will start from March 2009.



Mr. R. N. Khanna, CMD-C&S Group;
Dr. Luis Filipe Pereira, Executive Chairman-Efacec Group;
Mr. Ashok Khanna, MD-C&S Group; Mr. Artur Fuchs,
COO-Efacec Group on location (from right).

Oracle in Panel Division

C&S Panel Division went live on complete Oracle E-business Suite in October 2008. The LV Components Division is already using this software with excellent results. Subsequent to this, we will integrate it in other units and corporate head office. The benefits of integrated ERP package are tremendous. The function of ERP project are both direct and indirect. It is possible to measure the effect of the direct functions very easily. Some of them include saving money on huge margins,



proper communication and avoiding procedural delays. However when it comes to indirect functions most of them are not visible to the naked eye. They can be easily observed when a person gets more and more conversant with ERP process. Some of them are: Enhances flexibility, Improves Quality, Economizes the resources, Helps decision making, etc.

EON Telesystems



EON Telesystems Pvt. Ltd. was incorporated on 14th November 2008 for manufacturing of IPCU (Integrated Power Control Unit) and Customized Control Panels for Diesel Generating set for telecommunication services. It is a wholly owned subsidiary of C&S, with an ultramodern integrated manufacturing facility, spread over 18000 Sq. feet at Noida with installed capacity of up to 500 units/month, and is set up to provide world class products and services to the highest growing vertical of Telecom.



In expansion mode

In view of increased demand of C&S Electric products worldwide and addition of new products, the company is enhancing the capacity at Haridwar, to the tune of double the existing size, for;

- Low Voltage components specifically miniature circuit breakers, distribution boards, residual current circuit breakers and agro motor starters
- Low Voltage Switchboards including modular and intelligent MCCs and PCCs
- Isolated Phase Busducts, segregated & non segregated busducts and generator auxiliary compartments
- Air insulated busbar and sandwich busbar trunkings
- Lighting & Wiring Accessories including industrial plugs and sockets.

The construction for 5 buildings is in full swing.



C&S ties up with GE Multilin, for protection and automation systems for the power transmission sector

C&S and GE have signed an agreement whereby C&S shall act as a system design, engineering and integrating partner, for the entire GE multilin range of protection relays and related automation products. C&S will now supply Control and Relay panels as well as Automation systems, to the high end transmission as well as generation segments. This opens up for C&S Protection & Control Division a hitherto inaccessible market segment dominated by Aeva, ABB & Siemens.



Feeder Protection Bay Controller

While C&S with its own line of C&S relays has had a presence in medium voltage distribution and sub transmission sector it has until now been absent entirely in transmission sector. This agreement fulfils

C&S's long time desire to be an important player in this field. Within weeks of the agreement, the Protection and Control Division of C&S Electric has bagged two orders with a combined value of approximately 10 MNR against stiff competition.

The rapid expansion of the Power Sector with prime focus on augmentation of Generation and



UK Universal Relay Series

Transmission capacity has been a critical factor in ensuring the success story of

Indian economy. This has been necessitated by the rapid growth in Load which brings along with it the challenges in ensuring the reliability and security of

the increasing complex Grid. C&S Electric has long had a strong inhouse program and experience in protection technologies, and has made a long standing contribution to the growth of the Power Sector. Now, with this coupled with the technological backing of GE products, it is singularly poised to tap the potential by offering the best in Protection and Control Technology.

The GE Multilin families of Numerical relays cover the entire gamut of Protection and Control hardware besides Metering and Bay Control unit functionalities. The Numerical relays are IEC 61850 compliant thus replacing copper connections with redundant Fiber Optic



connectivity over the Substation Communication Network. Indeed the agreement helps us extend our existing Protection offerings to include new areas like Substation Automation and Energy Management Systems and besides tapping new and upcoming areas like Renewable energy. IEC 61850 allows Modular Substation Automation, Protection and Control design thus improving on the system reliability besides ensuring easy maintainability while bringing down the commissioning time significantly.

C&S as a Lead Sponsor

C&S sponsored 3rd Annual Conference on **Power Distribution in India "Key Challenges and Needed Response"** held at The Grand, New Delhi from 27th to 28th November 2008 organized by India Infrastructure Publishing Pvt. Ltd., publishers of "Power Line" and "Indian Infrastructure" magazines.

The conference was attended by professionals from different fields and was addressed by prominent speakers from Ministry of Power, State Electricity Boards, DISCOMs viz. WBSEDCL, BESCOM, DHBVN, JVVNL, MSEDCL, APCPDCL, BSES, CESU, NDPL, MPERC, UPERC, PSERC, REC, UGVCL, JSERC and many others.



Flagship Conclave '08 Meet Challenges Head On

An Elite Club conclave was organised for the Top 25 Stockists on 10th-12th July'08 in Ananda Resorts at Rishikesh. The objective of this meet was



to appreciate and recognise the stockists for their performance and contribution towards the growth of C&S. Interaction with the elite members was organised to get their feedbacks and to convey the



growth prospective which C&S has planned to achieve.



Other than intense business sessions, plenty of time was kept for relaxation and recreation in the beautiful surroundings of Himalayas. Participants had Yoga & Spa sessions and also enjoyed spectacular performances of ghazals by award winning artist, Ms Radhika Chopra.



Another Feather in the Cap of our CMD Mr. R.N. Khanna



CMD receiving the Award from the Hon'ble Minister in the presence of Dr. L.K. Malhotra - President and Mr. Ashok Kojaria - Vice President of the PHD Chamber

The Jury for the PHD Chamber Annual Awards for Excellence 2008, under the Chairmanship of Justice Mr. R.C. Lohati, Former Chief Justice of India, after intensive deliberations, has selected our CMD Mr. R.N. Khanna for the PHD Chamber "Distinguished Entrepreneurship Award 08"

The Award was presented to our C.M.D. by Mr. Pranab Mukherjee, Hon'ble Union Minister for External Affairs, during the Annual Session of PHD Chamber on 17th December, 2008 at Hotel Shangri-La, New Delhi.



C&S Team during the Award ceremony

Accolade for Mr. R.N. Khanna

The Delhi Government under Delhi Shiksha & Khel Vikas Sangh organised a function on 2nd September, 2008 at Delhi Secretariat I, P. Estate, New Delhi, to honour the deserving first generation entrepreneurs from Delhi. Our C.M.D. Mr. R.N. Khanna was awarded the "Delhi Udyog Ratna" for his outstanding role in his field of activity.

Picture Below shows (Left) Mr. Dharamendra Kumar, IAS Commissioner of Industries, (Middle) our CMD Mr. R.N. Khanna receiving the "Delhi Udyog Ratna" Award (consisting of a trophy, a shawl and a certificate from (Right) Shri Mangat Ram Singhal, Hon'ble Minister for Industry, Labour & Employment, Govt. of NCR Delhi.



C&S gets HR Excellence Award



C&S was awarded "HR Excellence Award" by Amity International Business School, Noida on the occasion of their 5th Global HR Summit 2008 held from 28th to 29th August 2008. This award was received by Mr Surinder Mohan, Vice President, Human Resources, C&S Noida Phase II.

C&S @ India Telecom 2008

C&S participated in India Telecom 2008 exhibition, one of the largest telecom sector exhibitions in India, held from 11th to 13th December 2008 at Pragati Maidan-New Delhi, inaugurated by Hon'ble Prime Minister of India, Dr. Man Mohan Singh at Pragati Maidan, New Delhi, and organised by Department of Telecommunications Ministry of Communications & Information Technology (DOT), Government of India and The Federation of Indian Chambers of Commerce and Industry (FICCI) to promote Indian Telecom sector in the global arena as an attractive destination.

With rapid deployment of telecommunication network and projected expansion of mobile telephony in India, we at C&S intend to become a leading player in this segment too.



Our new company, EON Telesystems Pvt. Ltd. displayed IPCUs which are available in ratings from 5 KVA to 50 KVA in fixed and upgradeable configurations for indoor and outdoor. Although all of our displayed models had invoked good response from service providers and users, IP-55 model for outdoor application was star of the show. It was energized and functionally operational in simulated rains. All potential customers / visitors had shown interest in this model.

Controls & Switchgear Himoinsa Pvt. Ltd. having state-of-the-art manufacturing facility spread over 40,000 Sqm of land area at Pantnagar (Uttarakhand) displayed DG Sets of 15 KVA and 45 KVA ratings. Visitors appreciated the quality and finish of the products especially the paint quality & the unique design for single point lifting of the genset.



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Product in focus



IEC-61008 

WiNtrip

In AC Residual Tripping Characteristics in 2 & 4 Pole configurations in 25, 40 & 63Amp and 30, 100 & 300mA

Residual Current Circuit Breaker



We touch your electricity everyday!

- Provides protection against earth fault/leakage current and also fulfills the function of isolation.
- Automatically measures and disconnects the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity.
- High short-circuit current withstand capacity - 10kA.
- Fire resistant plastic parts to withstand abnormal heating and strong impact.
- Independent of power supply and line voltage. Also free from external voltage fluctuation.
- Incorporates a filtering device for prevention of nuisance tripping due to transient voltage.

C&S Electric Ltd.

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