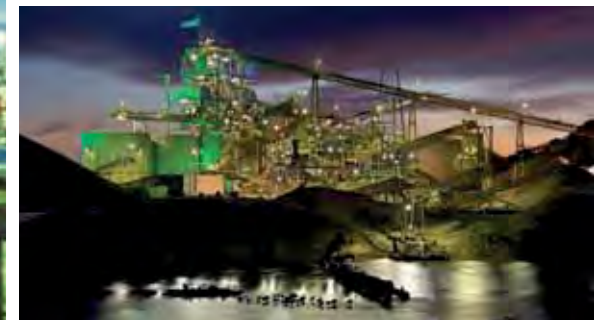


The new name in industrial safety and explosion protection.

Eaton's Crouse-Hinds Business



Crouse-Hinds
by **EAT•N**

Represented By:

IDEA Industrial Development
& Engineering Associates



Founded in 1911 by J.O. Eaton
Chairman and CEO – Alexander M. Cutler
Eaton Centre located in Cleveland, Ohio
Regional centres in Shanghai, China; Morges, Switzerland; Sao Paulo, Brazil
Innovation centres in the USA, China, Czech Republic and India
Customers in more than 150 countries

Two histories, one future



1906 – Company founded in Cologne. As early as the beginning of the century the Concordia Elektrizitäts-Aktiengesellschaft (CEAG) produced lamps for use in mines susceptible to firedamp that fulfilled the highest requirements posed on a safe source of light.

1912 – CEAG awarded prize for safety and quality. Award for the 'safest mining lamp in the world'.

1952 – Production of explosion-protected light fittings in Bochum to meet new market requirements.

1996 – The CEAG Group and Nortem, Spain, taken over by Cooper Industries Inc., Houston, Texas, (USA), Crouse-Hinds Division.

As a global power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses. With 100 years of electrical experience behind us, we're energised by the challenge of powering up a world that is set to demand twice as much energy as today.

Powering business worldwide

We provide integrated solutions that help make energy, in all its forms, more practical and accessible. Our innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.

We deliver:

- Electrical solutions that use less energy, improve power reliability and make the places we live and work in safer and more comfortable
- Aerospace solutions that make aircraft lighter, safer and less costly to operate, and help airports operate more effectively
- Hydraulic and electrical solutions that enable machines to deliver more productivity without wasting power
- Vehicle drivetrain and powertrain solutions that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

Eaton and Cooper united

Energising a world that demands more

A new partnership in industrial safety and explosion protection

Together, Eaton's Crouse-Hinds Business offers customers the most competitive, compliant product and service portfolio as a single stop for end-to-end electrical solutions including lighting, switchgear, circuit protection, connectivity, cable management, and explosion-protected instrumentation, enclosures and signalling. Put simply, we are the world's leading provider of products and services for electrical systems in hazardous environments.

Our new business offers the broadest portfolio of electrical and instrumentation safety products including:

Industrial/Explosion-proof

Harsh and hazardous location electrical products for secondary electrical distribution systems across the globe.

Instrumentation

Intrinsically safe interface and network products connecting field instruments to the control room.

Commercial Products

Broad offering of wire management products designed for commercial, light industrial and residential applications.

Airport Lighting

FAA and ICAO products for runway and taxiway applications for all airfield operational conditions.

Values we offer

In today's economic and health and safety conscious environments, it is crucial to deploy products which are reliable, safe and cost effective, thus reducing downtime, decreasing operational expenditure and helping to increase a plant's profitability.



Creating trust by ensuring safety

Reliability

- High standards and global presence
- Service and maintenance
- History and company affiliation

Knowledge

- IEC and NEC
- Pre- and after-sales
- Standards and Engineered to order
- Trainings
- Innovation

Quality

- Products
- Service
- Certifications worldwide
- Consulting



Designed for global specifications

Whatever your industry sector, we know the codes and standards. Our products are built to meet and exceed certifications applicable to locations around the world to ensure the safety of your employees and equipment. The knowledge and expertise we leverage every day to help your operation run smoother and safer lies not in one mind but in thousands of Eaton's Crouse-Hinds employees. We continuously collaborate with customers to ensure that you have the services and support needed to reach optimal performance.



Customisation with global reach

With thousands of products ready to perform to the highest standards of safety and reliability under the most demanding conditions, we have become the single source for electrical and safety equipment globally.

Complex, customised solutions from one source

We engineer and manufacture explosion-proof industry solutions that conform to all relevant standards and meet specific requirements in terms of size, specified technology or ambient conditions.

Ex Distribution Panel

- 120 V DC – Change Over Panel
- Weight 3 tons
- Measurements: 4.8 m long & 2.7 m high
- Built-in enclosures:
 - 6 x GHG 64, size 11
 - 2 x GHG 64, size 10
 - 2 x GHG 64, size 8
 - 2 x GHG 64, size 7



Gorgon Gas Project West Australia



Industrial and manufacturing

We offer an expansive portfolio of products for harsh, hazardous, and adverse environments, that will perform to the highest level of safety and reliability.

Chemical

Eaton's Crouse-Hinds Business has the experience and resources to offer expert advice and help you optimise performance in exceptional areas.

Location: Gorgon, Western Australia

Segment: Oil and Gas (LNG)

Challenge: Turtle-friendly lighting

Background: Development of the Greater Gorgon Area gas fields, operated by a joint venture of Chevron, ExxonMobil, Shell, Osaka Gas and Chubu Electric Power Company. At Barrow Island, Gorgon occupies around 1.3% of the island's uncleared landmass. The island is a Class A Nature Reserve and an important nesting area for sea turtles. So, any artificial light must not interfere with the nesting and hatching process of the sea turtles.

Solution: The deployment of Eaton's Crouse-Hinds Business eLLK 92 Ex-fluorescent light fittings for Zone 1 fitted with a special cover and light filter. The light source is a T8 long-life fluorescent white tube with light colour 830. Recommended lamp change interval is 6 years, with a recommended cover change interval of 12 years.

Results: Safe, maintenance-friendly bright plant lighting that prevents interference to the nesting sea turtles. Protecting the environment and while also ensuring safety of the plant.

Markets and solutions.

Refining

We have the resources to help you optimise the performance, efficiency and installation challenges of your refinery's electrical and lighting systems. We deliver an advantage you can see and measure.

Mining

Exceptionally durable, corrosion- and vibration-resistant products, ideal for use above ground, below ground and in processing facilities.

FLNG Project West Australia



Location: Shell Prelude FLNG – Hull 2030 Shell FLNG, Western Australia

Segment: Complex Engineering

Challenge: Building the largest offshore facility

Background: Prelude FLNG, the world's first floating liquefied natural gas (FLNG) project, 200 kilometres (120 miles) offshore of Western Australia. When complete, Prelude is expected to be the largest offshore floating facility ever built. The hull was assembled in the dry dock, before the turret and topsides were fitted at Samsung Heavy Industries' Geoje shipyard in South Korea. FLNG will allow Shell to produce natural gas at sea, turn it into liquefied natural gas and then transfer it directly to ships that will transport it to customers – eliminating the need for onshore processing facilities. The facility is about a quarter size of an equivalent plant on land.

Solution: Standard Lighting eLLK, eLLB (Recessed Light fittings), Emergency Lighting NIB with longer light output setting (3h instead of 1.5 – without battery). Batteries will be delivered at a later stage when the light fittings are installed, to save maintenance costs; special tube Phillips TL-D Xtreme lamp, long-life tube, 100% recycling, low quicksilver content; PX-floodlights, plugs and sockets.

Results: Cost-efficient building of the largest LNG carrier. Maximum safety in an extremely harsh and hazardous offshore location from a manufacturer with a proven track record for high quality long-life lighting solutions.

Location: North Sea, Norwegian sector

Segment: System Integration – Battery Power

Challenge: Reduce maintenance demands on offshore platform.

Background: The Norwegian oil and gas industry is today highly focused on finding new ways to reduce maintenance demands on their offshore production platforms. Routine inspection of emergency lighting onboard an offshore platform requires many maintenance man-hours on an ongoing basis.

Solution: Eaton's Crouse-Hinds Business EX emergency lighting systems with ZB-S central battery monitoring system.

Results: By providing a central point for monitoring all emergency light fittings and their associated central battery back-up system, Eaton's Crouse-Hinds Business provides a solution that greatly reduces onboard maintenance demands and associated costs. The system allows provision for remote monitoring from the shore.



Maintenance Reduction North Sea

Oil and Gas

Eaton's Crouse-Hinds Business supports oil and gas efforts with an unparalleled breadth of products and solutions that solve the real-world problems the industry faces each day, enhancing safety, productivity and performance.

Drilling

We provide special products which are exceptionally durable, corrosion resistant and can withstand extreme conditions as well as high vibration.

Location: Tüpras refineries, Turkey

Segment: Portable Power Solutions

Challenge: Safe, cost saving and environmental friendly maintenance.

Background: Tüpras is Turkey's largest industrial enterprise, with a 28.1m tons crude oil processing capacity. Tüpras' main principles are employee health and safety, operational safety and environmental protection. To support these principles, Tüpras has selected CEAG IEC portable power solutions for shutdown and maintenance periods in the refineries at Izmit, Izmir, Kirikkale and Batman. These units will be supplied to all contractors working in Tüpras for servicing and to prevent from using defective cables, connectors and incompatibility of components. Further, by keeping the inventory of all portable power systems at Tüpras, there is no overrun due to lack of equipment. Maintenance shutdowns could be scheduled in advance to save production uptime and loss of high value output.

Solution: CEAG IEC portable power designs for shutdown and maintenance periods at the refineries.

Results: Safe, cost saving and environmental friendly maintenance. All requirements of the customer had been fulfilled.



Maintenance Project Turkey

Food and Beverage

Product solutions designed to keep the food and beverage industry efficient and code-compliant while ensuring workplace safety and reducing downtime.

Pharmaceutical

We offer various product applications that meet the demands of modern technology, ensure reliability and safety around the globe.

Power management

Solutions for every application

Signal, Alarms and Surveillance

High-powered speakers, strobes and horns for indoor and outdoor applications cover large areas with crisp, intelligible warnings.

Motor Control/Electrical Distribution

Explosion-proof VFDs are highly flexible AC drives which can be mounted next to the motor in hazardous locations.

Lighting

Outdoor area luminaires provide street lighting and floodlighting solutions.

Support Structures

Safety grating on walkways and platforms utilises a unique serrated surface to provide superior slip resistance than traditional methods.

Lighting

Illuminating your way, no matter the environment – hazardous, emergency or simply general lighting applications.

Enclosures

Junction boxes are used in electrical distribution systems in hazardous and non-hazardous areas to house terminal blocks, relays and other electrical devices.

Connectivity

Rugged construction and numerous interlocking designs safely and reliably connect power where needed, including hazardous areas.

Wireless

Wireless products monitor tank farms, forming part of the plant energy management system and OBL alarm monitoring system.



Lighting

- Portable Ex lamps
- Ex fluorescent light fittings
- Ex signal and escape luminaires
- Ex pendant light fittings and floodlights



Switchgear

- Ex junction boxes and terminal enclosures
- Ex control units and control stations
- Ex safety and main current switches
- Ex distributions



Connectivity

- Ex and non-Ex plugs and receptacles
- Ex portable repair and maintenance socket distribution
- Ex Portable multi-outlet distribution and cable reels
- Ex cable glands in metal and plastic design
- eXLink connectors



Instrumentation

- Industrial Ethernet
- Industrial security
- Industrial wireless
- Intrinsic safety and process I/O
- Process alarm equipment
- HMI and visualisation
- Surge protection



Hazardous Area Communication

- Ex CCTV solutions
- Ex manual call points
- Ex signals and alarms
- Ex telephones
- Ex communication solutions



Services & Solutions

- ▼ Customer requirements
- ▼ Proposals of technical solutions
- ▼ Design and specification
- ▼ Manufacturing
- ▼ Customer inspection/acceptance
- ▼ Documentation
- ▼ Maintenance
- ▼ Training