Complete range of cable solutions and services for ports and harbors worldwide
Efficient and secure megaports require...

The globalization of maritime commerce is changing ports from traditional interfaces between land and sea to intermodal megaports which require deepwater docking, easy access for trucks and rail services, massive material handling equipment, and a complete logistics network based on computer and Internet technologies.

With containership volumes set to grow 6-8% by 2015, port terminals are facing pressures to improve productivity and efficiency, especially to accommodate Panamax and Post-Panamax containerships. Established ports like Rotterdam (Europe’s largest) have been undergoing expansion on reclaimed land, while completely new facilities are being built from scratch, like Shanghai’s Yangshan. In fact, there is a flurry of expansion and “Greenfield” projects in Russia, Brazil, India, Kuwait, Saudi Arabia, Qatar and the UAE, all of them multi-billion dollar projects.

Meanwhile, a number of other trends are shaping the industry. Significant investment is going into cruise terminals, especially in the Caribbean and even in the Far East to accommodate new tourist patterns. Also, oil-producing countries are investing heavily in energy terminals, like Ras Laffan in Qatar which processes and transships liquefied natural gas.

Sustainability is also an important driver of change. In California ships are now obliged by law to turn off engines to reduce CO₂ through shore-to-ship power supply (“cold-ironing”), and cranes are being refitted with electrical motors instead of polluting diesel motors. Since 9/11, security is also an important issue, calling for new telecom-based systems for management, surveillance and control.

As a port authority, EPC contractor, distributor or crane OEM you are looking for ways to improve productivity. That means meeting the challenges of size, capacity and intermodality. It also means adjusting to new tourism, trade, and energy-processing opportunities, while dealing with the challenges of sustainability and security. All of these issues largely depend on your choice of cables and cable solutions.

What you expect from a cable manufacturer:

- Wide range of cables easily available close to megaproject development sites
- Off-the-shelf products where possible, customized solutions where necessary
- Ruggedness, flexibility and longevity in the busy port and marine environment
- Energy and telecom solutions that take into account intermodal terminal needs
- Exemplary stock management especially for maintenance and repair operations (MRO)
- Environmentally-safe cables to lower port pollution and improve energy efficiency
- Services to deal with accessories, installation, maintenance, repair and training
To meet the loading, off-loading, and transport challenges of today’s intermodal megaports, Nexans has developed a broad range of cables and cable solutions for virtually every energy and telecommunications requirement. Our world presence, often backed up by local manufacturing capacity, means that we are located close to established ports and new megaprojects.

Nexans energy cables and accessories power everything from offices and warehouses to automated cranes and stackers. Where necessary, cables are Low Fire Hazard (LFH) to protect people and infrastructure. Access-road lighting cables provide efficient illumination for the 1,000 to 5,000 truck movements per day in a busy port terminal.

Since recent attention has been focused on reducing pollution coming from the diesel engines of shoreside ships, Nexans has Alternative Maritime Power (AMP) cables and PLUG systems for cold-ironing. And we have developed lead-free cables for oil and gas terminals, and special cables that can operate in ultra-cold environments or safely transfer liquefied gas.

OEMs will especially appreciate our wide choice of material handling cables for festoons and reels. They come in reduced outer cable diameters, with high tensile strength, flexibility and perennial wear-resistance. The benefits are cost savings, simplified cabling, greater delivery length, accommodation to smaller reeling and guiding systems, and lower shipping charges. For baggage handling conveyor manufacturers for cruise ship homeports, we produce flexible LFH control and power cables which can safely operate at extremely high temperatures.

Since telecommunications are at the core of port operations and critical to issues like security, operational efficiency and safety, we have the most complete offer of any cable company, ranging from optical fiber for harbor monitoring, sophisticated LANs and WANs (including interconnecting components), special cables for cameras of all kinds, and intelligent Ethernet switch systems for surveillance and automated operations. Wherever possible, we merge energy and telecommunications in special hybrid solutions to consolidate applications wherever possible in the smallest space.

Finally, since high performance and reliable support are essential to economic efficiency, Nexans also provides numerous services based on our proven experience in the related market segments of shipbuilding, oil and gas, and transport. This includes network design, testing, marine installation, upgrades, recycling and training.

**Nexans for safe and efficient port operations**

- A broad range of energy and telecom cables customized for ports
- Close proximity to many existing ports and new megaprojects
- Both fixed and flexible cables to meet the needs of superstructure and infrastructure
- LANs and WANs solutions to deal with the complex information needs of port management
- Hybrid solutions to consolidate applications wherever possible in the smallest space
- Land solutions complemented by subsea solutions (e.g. power for large buoys, ship monitoring)
- A complete range of fire safety cables to protect people, goods and equipment
- Products to help create greener, more environmentally-friendly ports
- Cables that can strengthen security and contribute to threat detection
- Services to support expansion of established ports and Greenfield projects worldwide
Today’s expanding deepwater ports...

**ENERGY NETWORKS AND SHORESIDE POWER**

**LV and MV power cables**
A wide range of cables (up to 45 kV) for overall energy supply for lighting, heating, air conditioning, and powering everything from conveyors to giant STS and RMG Cranes.

Nexans Korea supplied Consolidated Contractors International Company (CCC) with LV and MV power cables to energize a new oil and gas port in the Ras Laffan Industrial City (Qatar).

**Access-road lighting cables**
A 3.6/6 kV three single-core twisted cable in XLPE with a polyethylene sheath provides a power backbone for highway lighting along port access routes. Very similar to public highway lighting cables, these robust cables are both water-resistant for near-port conditions and can be safely buried.

**LV fire-safety cables**
Alsecure® is Nexans range for Low Fire Hazard cables. These cables improve evacuation time during fire by reducing the smoke opacity and limiting gas emission. Alsecure® Premium, our new range of fire-resistant cables, benefits from Nexans patented INFIT™ technology. It makes them easier to strip and more resistant to mechanical damage than cables with mica-tape or silicone rubber technologies.

**Power accessories**
Junctions and terminations using various technologies (heat shrink, cold shrink, “tape and resin” for watertightness); unpluggable dead-break connectors, and touchable screened connectors; lightning and surge arrestors; junction boxes; jumpers between transformers and switchgear; single or double-branch joints.

All Nexans accessories are customized for port environments, especially where human activities and power supply are in close proximity, or where oil and gas refining and transfer operations constitute a special hazard.

**Flexible hybrid cables**
Nexans has numerous cable designs that facilitate control, surveillance and communications, often combining LV power with copper LAN cables, coaxial cables, and increasingly, singlemode optical fibers.

To SSA Mexico (a Camix subsidiary) Nexans supplied a reinforced hybrid cable containing Cat 7 data, 250V energy and coaxial cables for a pylon-mounted digital video surveillance network in a container storage area.

**Alternative Maritime Power (AMP) and PLUG systems**
This tough and flexible polyurethane-sheathed reeling cable with 6.6 kV power supply, control cores and optical fiber provides alternative power, data transfer and telecommunications to reduce exhaust pollution and increase data flow in container ports. A new reel-less submersible PLUG version offers automatic quayside connection.

Nexans supplies reeling cable for Cavotec’s AMP system which is used worldwide for both merchant marine and navy applications.
Flexible PVC or LFH

Flexible rubber cables for festoon, reeling and spreader applications for cranes of all types and sizes: STSs, RTGs, RMGs and ASCs. Smaller and lighter cables make it possible to use smaller reels and motors and accommodate all-electric drives, while quality designs eliminate the “corkscrew” effect, even at high operating speeds.

For the port of Antwerp, Nexans delivered high-speed MV reeling cable for ASCs that have been functioning for five years at 270 m per minute without disruptive corkscrewing.

Flexible PVC or LFH control, power and bus cables

Although PVC can be used in open areas, Low Fire Hazard cables protect personnel and equipment from smoke and corrosive gases, and operate at up to 90°C, providing signalling, control and power supply for conveyor belts, motors, sensors, and sorters. Profibus, Asi Bus and Hybrid bus are also used, in addition to easy-to-install plastic optical fiber.

Aside from baggage handling systems developed for Cruise Terminals, bus cables can integrate other port applications, like security, surveillance, building management and climate control.
GLOBAL EXPERTISE
Our complete range of cables and solutions for the port environment combine both telecommunications and energy essential for multimodal transport. Since high data capacity and the Internet are often needed to scan and track goods, while power is needed to move them. We also serve growing port needs for security, safety and surveillance.

LOCAL PRESENCE
Port megaprojects currently underway worldwide require a cable supplier with international experience and often local presence. Serving global development is facilitated by our industrial capacity in 39 countries, and our reputation for encouraging industrial offsets and technology transfers, and providing installation and maintenance training.

INNOVATION
As ports become environmentally-aware, we are providing a new range of customized cables for shore-based power systems, and the electrification of handling equipment. Automation is increasingly being applied to loading, unloading and goods movement, requiring rugged and efficient, high-performance cables to accommodate higher speeds.

Service and support for sustainable ports
Global expert in cables and cabling systems

With energy as the basis of its development, Nexans, the worldwide leader in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry, building and Local Area Network markets. Nexans addresses a series of market segments: from energy, transport and telecom networks to shipbuilding, oil and gas, nuclear power, automotives, electronics, aeronautics, material handling and automation. Nexans is a responsible industrial company that regards sustainable development as integral to its global and operational strategy. Continuous innovation in products, solutions and services, employee development and engagement, and the introduction of safe industrial processes with limited environmental impact are among the key initiatives that place Nexans at the core of a sustainable future. With an industrial presence in 39 countries and commercial activities worldwide, Nexans employs 22,700 people and had sales in 2009 of 5 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.