



**THE
OKONITE
COMPANY**

RAILROAD CABLES



Serving the Railroad Industry Since 1878

SERVING THE RAILROAD INDUSTRY SINCE 1878

From its inception, Service to the Railroad Industry and the Quality of Product has been the cornerstone of The Okonite Company's existence. It is noteworthy that the first low voltage, motor operated semaphore signal, installed in 1893 by the New Jersey Central Railroad was wired with Okonite cable.

Since 1878 The Okonite Company has serviced the railroad industry and today is the best equipped of all wire and cable manufacturers, from the standpoint of research and development, production capabilities, engineering and service to continue to supply the unique needs of the railroad industry.

Since 1976, The Okonite Company has been owned 100% by the employees under an Employee Stock Ownership Trust (ESOT) benefit program. Over the years many companies have initiated similar programs, but Okonite's ESOT remains the model for both longevity and benefits to the employee participants.

Because of the program every "Okoniter" has a vested interest to provide our customers with the utmost in product Quality and service.



**THE
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COMPANY**

BUILDING LASTING QUALITY

For 135 years the name OKONITE has been synonymous with QUALITY. In 1997, The Okonite Company successfully completed an internal implementation of the Quality Management procedures required for ISO 9000. This was done at Headquarters, our Research Labs, all plant locations as well as all of our (5) Service Center locations.

The AAR has established a Qualification Process for their "Suppliers Quality Management System" that is administered by the SMI - RIF (Supply Management Institute - Rail Industry Forum).

Okonite has contracted with an AAR approved certification company and received 3rd party certification to ISO 9000 and AAR M-1003 for our (4) manufacturing plants located in Richmond, KY; Ashton, RI; Orangeburg, SC and Santa Maria, CA and Corporate HQ located in Ramsey, NJ. Refer to our Website at www.okonite.com/quality/assurance.html, for the latest copy of this certification along with our current Quality System Manual.

QUALITY SYSTEM

The Okonite Company's commitment to Total Quality in the design, manufacture, delivery and service of wire and cable products since 1878 has been proven by continuing improvements achieved by dedicated employees for our valued customers. Quality consistency of Okonite cables for industrial, railroad, rapid transit, electric utility, generating (both fossil and nuclear) /distribution and military applications are demonstrated by Okonite ESOP employees following planned and systematic procedures which assure customer satisfaction and years of reliable service.

1. ORGANIZATION

The Okonite Company has established and executed a formal Quality Management System since the 1970's. The authority and duties of the personnel and organizations performing quality functions are clearly defined and documented.

2. DESIGN CONTROL

Okonite HQ design control is based upon the selection and qualification of raw materials that are used to produce premium standard cable constructions. These materials must meet or exceed Okonite and regulatory acceptance test and performance criteria. Customer requirements are satisfied by applying Okonite cable quality standards to meet the highest performance criteria.



Material Research Lab

3. CONTROL OF PURCHASE MATERIAL

Cable quality is assured by a proven system of Okonite policies and procedures for product materials that provide for development and review of quality requirements, materials evaluation, purchase specifications, supplier selection/approvals and incoming materials inspection. Suppliers of materials that have achieved satisfactory performance and are certified, enter into a Quality Partnership to maintain the highest consistency.

4. INSPECTION

Inspection and testing programs are in effect to insure compliance with appropriate instructions, Industry Specifications, procedures and/or drawings. Inspections are performed by trained and qualified personnel.

5. TEST CONTROL

Inspection and testing programs are in effect to insure compliance with appropriate instructions, Industry Specifications, procedures and/or drawings. Inspections are performed by trained and qualified personnel.

6. CONTROL OF MEASURING & TEST EQUIPMENT

Measurement devices employed for acceptance/rejection decisions of materials, components and finished wire and cables are covered by a stringent calibration maintenance program. This includes as-found conditions, frequency, status identification and the use of standards traceable to The National Institute of Standards Technology (NIST).

7. INSPECTION, TEST & OPERATING STATUS

A product traveler document (C&R) is prepared for each item to be manufactured. This document defines the manufacturing processes involved, the proper sequence of all manufacturing, test and inspection operations required to assure the product complies with applicable specifications. The highest quality manufacturing sequence is assured on every cable shipment.



Purchased Material Testing



Okonite Information System for "In Process" Testing

8. QUALITY RECORDS

Procedures have been established and are maintained that control quality records. Quality records are maintained by each functional activity as a means of providing evidence that OKONITE wire/cables meet specified technical and quality requirements. Applicable system records and retention periods are as specified within our Quality System Manual.

9. QUALITY AUDITS

Internal audits are performed by Quality Assurance in accordance with established procedures on a regularly scheduled basis. These audits provide ongoing analysis of the effectiveness of the Okonite Quality System in maintaining compliance to three important industry requirements; 10CFR50 Appendix B, which is the Quality Assurance Criteria for Nuclear Power Plants, AAR M-1003 for our Class 1 Railroads and International Standard ISO 9000-1994 for our commercial customers.



Material Qualification Testing

Third party certification to AAR M-1003 and ISO 9000-1994 is performed by an AAR approved certification company every three years at our manufacturing facilities and corporate headquarters. Records of these audits are maintained and copies of our current certifications are maintained on our web page.

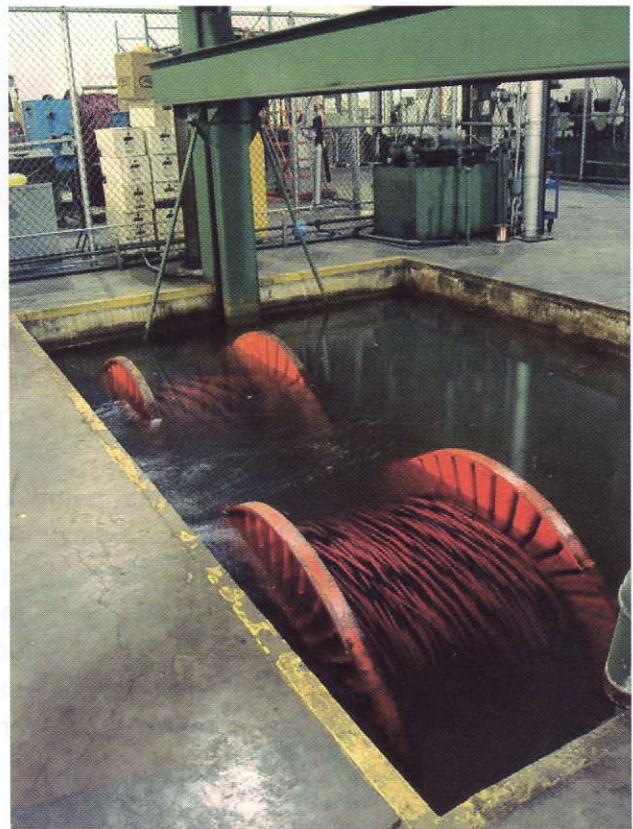
10. TRAINING

Personnel performing activities affecting quality are qualified for their assigned duties. Training needs are identified and appropriate instruction is provided, as required.

11. STATISTICAL TECHNIQUES

Statistical data is utilized for process control, data analysis (including process capability), defect prevention, problem identification and solving, product improvement and service improvement.

The Okonite Company has made, and will continue to make, uncompromising commitment to quality and reliability of the products manufactured in our factories



Cable Tank Testing

THE OKONITE CABLE SYSTEM

The Okonite Cable System is made up of several key components

CONDUCTOR

Okonite produces, in-house, the copper conductor furnished in each railroad product. This conductor is created by "Drawing Down" 5/16" copper rod through a series of dies to produce the desired conductor size

INSULATION

The cornerstone of a Vital Signal Cable is the insulation covering the conductor. Many years ago, The Okonite Company formulated a proprietary Ethylene Propylene Rubber Compound (EPR) in our Material Research Laboratory specifically for the Railroad Industry. Electrical Integrity, Moisture Resistance, Thermal Stability, Vibration Resistance, and Ruggedness were all key considerations by the Okonite Technical design Team. Our State-of-the-Art Compound facility in Orangeburg, South Carolina is dedicated to the compounding of this insulation. This plant represents the latest in equipment and technology using a closed loop automated and computer controlled process that meets every aspect of the ISO 9000-1994 Quality Standard.

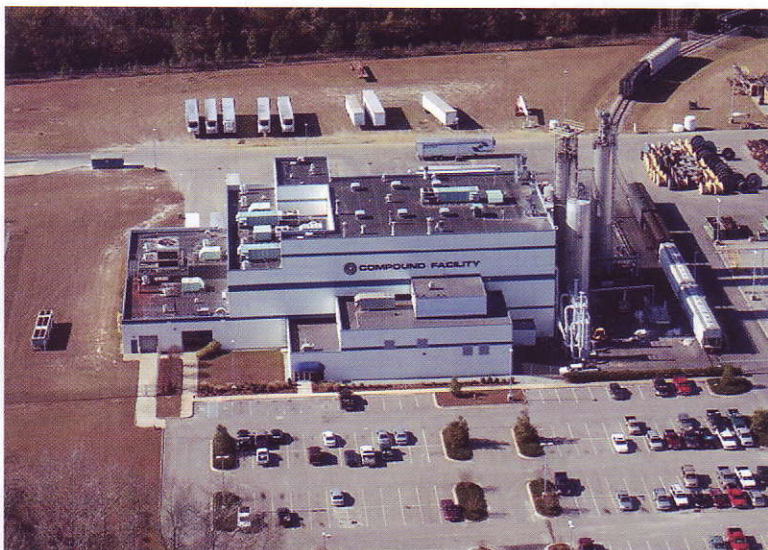
Okonite is very proud of this in-house capability to develop materials specifically for the Railroad Industry. This compounding uniqueness insures our commitment to Quality and Reliability that has been proven by our Long-Term Record of Service.

PRODUCT ASSEMBLY

The Okonite Company has the latest State-of-the-Art manufacturing facilities. This modern equipment allows Okonite to maintain the most exacting performance standards.

After the insulation has been extruded on the individual conductors and cured, then multi-conductor vital signal cable are formed by an elaborate cabling process.

After cabling into a multi-conductor core, a copper alloy shield is applied to provide mechanical and electrical protection



Orangeburg, South Carolina Compound Facility



New Compound Equipment

JACKETING

The primary function of a cable jacket is to protect the insulated conductors during installation throughout service. Several jacketing materials are available and provide long-life installation requirements. Many of the Okonite jacket materials are produced at our Orangeburg, SC facility.

Okonite provides a full spectrum of jacketing materials including:

OKOLENE® - A thermoplastic polyethylene based jacketing compound with excellent moisture resistance and mechanical ruggedness.

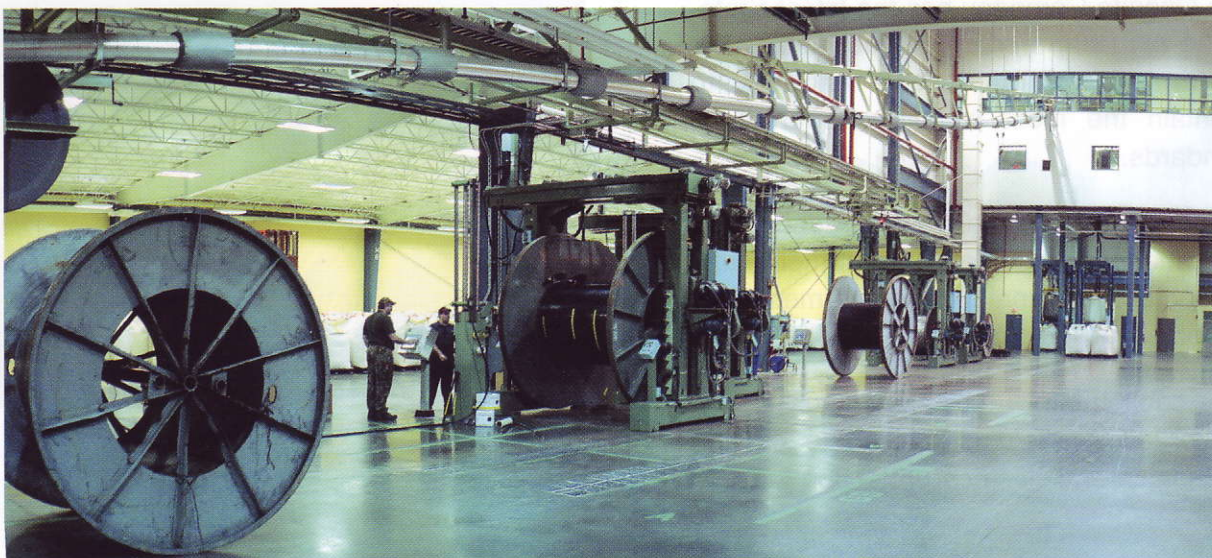
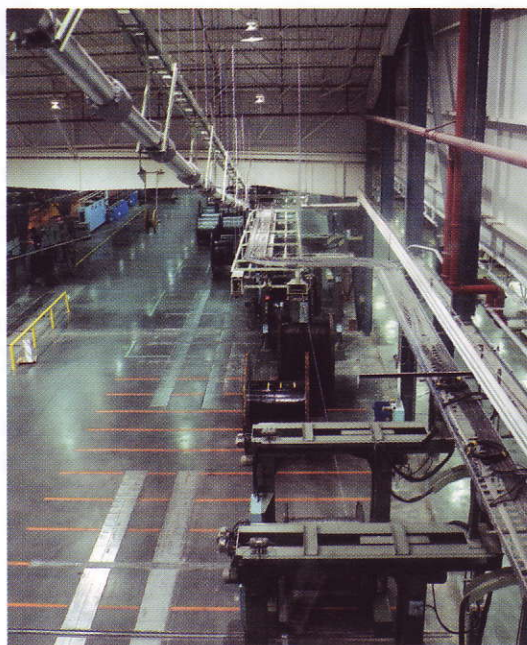
OKOCLEAR® - A low smoke, zero halogen compound ideal for tunnels and other enclosed or hazardous locations where human exposure to hazardous elements need to be minimized.

OKOSEAL® - A polyvinyl chloride (PVC) Thermoplastic jacketing compound with excellent resistance to flame and most chemicals.

OKOLON®
A moisture resistant, flame retardant chlorinated polyethylene (CPE) jacketing material. Available in Thermosetting and Thermoplastic constructions.



View of Richmond and Orangeburg type continuous vulcanization profiles



CV Lines (above and below) at our Richmond and Orangeburg Manufacturing Plants

METALLIC ARMORS AND SHIELDS

Copper Alloy Tape armor — A helically applied 7 mil high performance copper alloy tape designed to resist damage from rodents and termites as well as excellent mechanical protection.



Armored
Signal
Cable

C-L-X® — Continuous lightweight external armor which can be furnished in aluminum, bronze, copper or steel



C-L-X
Cable

Underwater or Submarine — Cables such as this are a particular Okonite speciality. Typically very rugged constructions, this underwater cable has a totally filled core, a non-hygroscopic core tape, polyethylene jacket, jute bedding and high strength armor wires. In some constructions wire armors are flooded with a bitumen material or covered overall by a polyethylene jacket.



Armored
Submarine
Telephone
Cable

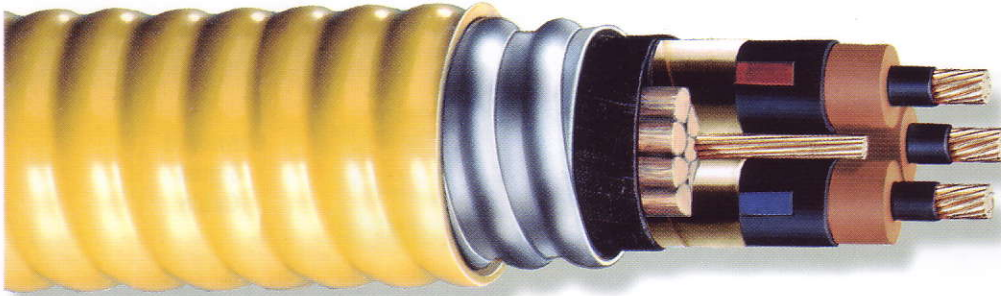
Composite Cable — This cable incorporates video pair conductors along with communications conductors in common overall jacket, bi-metal shielding tape, inner polyethylene jacket, jute covering under wire armor and an outer polyethylene jacket. Okonite can provide cables having voice, data, control, power and instrumentation conductors in one composite construction.



Voice, Data,
Control & Power
Composite Cable

METALLIC ARMORS AND SHIELDS

Loxarmor® — Aluminum or Galvanized Steel interlocked armor.



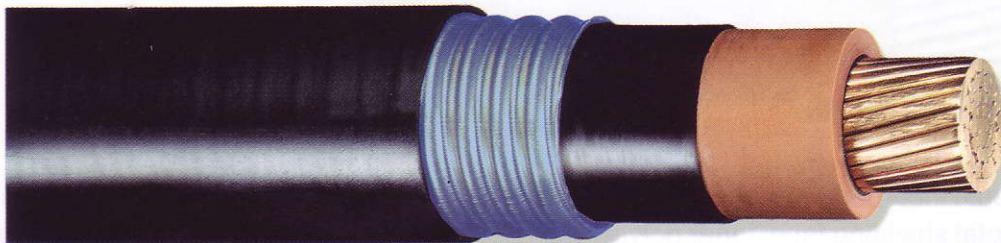
Loxarmor
Cable

Lead Sheath — Okonite can provide lead sheathed cable in all sizes and types. Medium voltage and 600 volt power cable, vital signal cable, communication cable and instrumentation cable.



Lead
Sheath
Cable

Okobon — This is a moisture resistant cable finish consisting of aluminum/copolymer tape fused to itself and an overall (CPE) chlorinated polyethylene jacket.



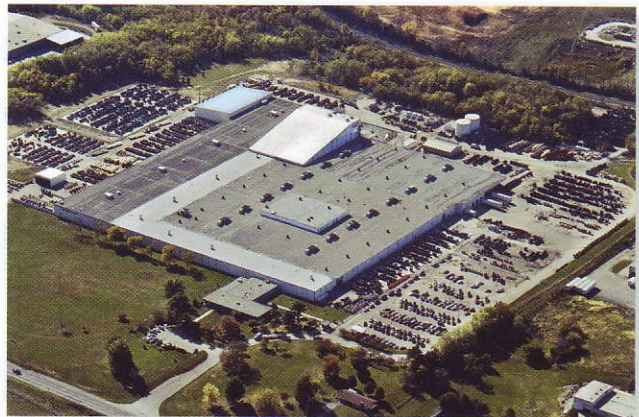
Okobon
Cable

MULTI-PLANT PRODUCTION CAPABILITIES

Okonite operates manufacturing facilities in Santa Maria, California; Richmond, Kentucky; Orangeburg, South Carolina; Paterson, New Jersey and Ashton, Rhode Island. All of these plants are involved with cable products for the Railroad Industry.



Santa Maria, California



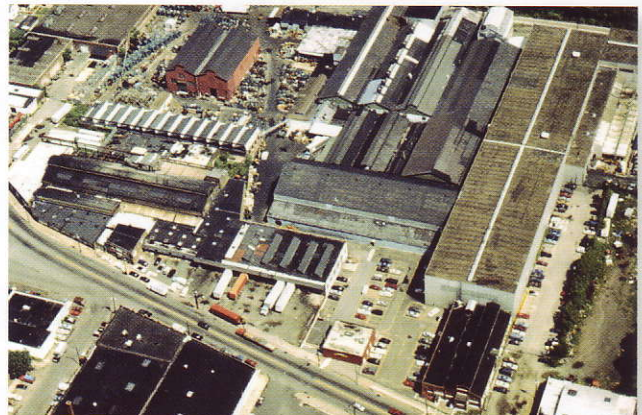
Richmond, Kentucky



Orangeburg, South Carolina



Ashton, Rhode Island



Paterson, New Jersey

This multi-plant capability provides our customers with multi-source manufacturing that assures an uninterrupted supply of cable for all your project and maintenance needs.

RAILROAD INDUSTRY MULTI-PLANT PRODUCTION CAPABILITY Okonite Plant Capability by Location

The following chart shows the multi-plant production capability of The Okonite Company.

CABLE DESIGN	Richmond KY	Santa Maria CA	Orangeburg SC	Ashton RI	Paterson NJ
Armored Underground Signal Cable	X	X	X		
DF Direct Burial Signal Cable	X	X	X		
Aerial Signal Cable	X	X	X		
Okonite-Okolon TS-CPE Duplex Track Wire	X	X	X		
Okonite-Okolene Duplex Track Wire	X	X	X		
Okozel Case Wire	X	X			
Okonite/Okoseal TC Blue	X	X			
Okonite Tower and Case Wire	X	X			
DEL	X	X	X		
Okolon TS-CPE Line Wire	X	X	X		
Okolene Line Wire	X	X	X	X	
Okonite-Okolon TS-CPE Case Wire	X	X		X	
Okonite-Nylon Braid Case Wire				X	
Centralized Traffic Control Cable	X	X		X	
Okolene-Okolene Power Cable	X	X		X	
Okonite Communication Case				X	X
Okolene-Okoseal Control Cable	X		X	X	
Okoguard URO-J	X	X	X		
CTC-Code Line Cable		X		X	
Low Inductive Interference Cable	X	X		X	
Medium Voltage Power Cable	X	X	X		
C-L-X	X	X		X	
Self Supporting Aerial Cable	X	X	X		
Paper Insulated Lead Covered (PILC)					X
Instrumentation (Armored & Unarmored)				X	

OKONITE CABLES - IN STOCK

Okonite utilizes an online computer network that links district sales offices, service centers and manufacturing plants for the purpose of providing instantaneous in-stock and stock replenishment information. Each service center maintains a large inventory of Okonite products, including a complete variety of standard railroad cable constructions, tailored to the needs of the geographical area being served, i.e. Houston, Texas; Kansas City, Kansas; New Orleans, Louisiana; Pittsburgh, Pennsylvania; and Portland, Oregon. There is also component and finished stock at our five manufacturing plants in Kentucky, South Carolina, California, Rhode Island and New Jersey.

Your local Okonite office is ready to assist you with information and to expedite your cable selection. Our "in Stock" program ensures our customers of the shortest possible lead times, often less than 1 week, combined with maximum flexibility in reel lengths and packaging.

▲ All stock items are identified on our product data sheets with a black triangle next to the catalog number.



SERVICE CENTERS



**Portland District Office
and Service Center**
6777 S.W. Bonita Road Suite 150
Portland, OR 97224
(503) 598-0598
FAX:(503) 620-7447



**New Orleans District Office
and Service Center**
101 Delta Drive, Suite J
St. Rose, LA 70087
(504) 467-1920
FAX:(504) 467-1926



Pittsburgh Service Center
120 Solar Drive
Imperial, PA 15126
(724) 899-4300
FAX:(724) 899-4320



**Kansas City District Office
and Service Center**
2631 S. 96th Street
Edwardsville, KS 66111
(913) 422-6958
FAX:(913) 422-1647



**Houston District Office
and Service Center**
802 Century Plaza Drive
Houston, TX 77073
(281) 821-5500
FAX:(281) 821-7855

COMPONENT STOCK INVENTORY

The Okonite Company maintains several million feet of component (single insulated conductor) stock inventory in many conductor sizes. This allows us to cable, shield and jacket where necessary, a final product in a very short time.



Component Stock Inventory



Okonite Cables Facilities Overview

District Offices, Manufacturing Plants & Service Centers

Manufacturing Plants



Orangeburg, SC - Manufacturing Plant



Orangeburg, SC - Compound Facility



Richmond, KY - Manufacturing Plant



Santa Maria, CA - Manufacturing Plant



Ashton, RI - Manufacturing Plant



Houston, TX



New Orleans, LA

Atlanta District Office
(770) 928-9778
FAX: (770) 928-0913
E-Mail: atlanta@okonite.com

Birmingham District Office
(205) 655-0390
FAX: (205) 655-0393
E-Mail: birmingham@okonite.com

Boston District Office
(603) 625-1900
(781) 749-3374
FAX: (603) 624-2252
E-Mail: boston@okonite.com

Charlotte District Office
(704) 542-1572
FAX: (704) 541-6183
E-Mail: charlotte@okonite.com

Chicago District Office
(630) 961-3100
FAX: (630) 961-3273
E-Mail: chicago@okonite.com

Cincinnati District Office
(513) 771-2122
FAX: (513) 771-2126
E-Mail: cincinnati@okonite.com

Cleveland District Office
(330) 926-9181
FAX: (330) 926-9183
E-Mail: cleveland@okonite.com

Dallas District Office
(940) 383-1967
FAX: (940) 383-8447
E-Mail: dallas@okonite.com

Denver District Office
(303) 255-5531
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E-Mail: denver@okonite.com

Hartford District Office
(860) 258-1900
FAX: (860) 258-1903
E-Mail: hartford@okonite.com

Houston District Office & Service Center
(281) 821-5500
FAX: (281) 821-7855
E-Mail: houston@okonite.com

Kansas City District Office & Service Center
(913) 422-6958
FAX: (913) 422-1647
E-Mail: kansascity@okonite.com

Los Angeles District Office
(562) 590-3070
Fax: (562) 590-3139
E-Mail: losangeles@okonite.com

Minneapolis District Office
(763) 432-3818
FAX: (763) 432-3811
E-Mail: minneapolis@okonite.com

New Orleans District Office and Service Center
(504) 467-1920
FAX: (504) 467-1926
E-Mail: neworleans@okonite.com

New York District Office
NJ (973) 742-8040
NY (212) 239-0660
FAX: (973) 742-2156
E-Mail: newyork@okonite.com

Philadelphia District Office
(856) 931-0595
(215) 567-5739
FAX: (856) 931-1193
E-Mail: philadelphia@okonite.com

Phoenix District Office
(480) 838-8596
FAX: (480) 897-8924
E-Mail: phoenix@okonite.com

Pittsburgh Service Center
(724) 899-4300
FAX: (724) 899-4320
E-Mail: pittsburgh@okonite.com

Portland District Office & Service Center
(503) 598-0598
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Kansas City, KS



Portland, OR



Pittsburgh, PA

Corporate HDQ



Ramsey, NJ



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