

# CABLE PRODUCTION & EVALUATION TEST FACILITY at **OKONITE**



**THE  
OKONITE  
COMPANY**

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# Okonite Electrical

Since its founding in 1878, the cornerstone of The Okonite Company's philosophy has been the complete evaluation and testing of each product before it is shipped to customers. Okonite is dedicated to this principle. It is an ongoing policy that is manifested in the recent multi-million dollar investments made in our many production test facilities. We have the most sophisticated test capabilities in the wire and cable industry.

Okonite has always had the ability to perform all tests required by such agencies as AEIC, UL, IEEE, ASTM, ICEA, IEC, NRC, ANSI, the United States Navy and the Coast Guard. The latest additions to our expanded facilities enable us to conduct these tests more frequently and with greater efficiency. We are able to conduct all of the tests mentioned above in-house.

Okonite has long recognized that the very best way to serve our customers is by enhancing the high standards we have always set for our product quality and reliability. In keeping with this tradition, this brochure proudly displays the additions and improvements that have recently been made to our electrical laboratories and our manufacturing test facilities.

# TEST

## facilities



Orangeburg, S.C. - Compound Facility



Richmond, Ky.



Ashton, R.I.



Santa Maria, CA.



Paterson, N.J.

*Our  
State-of-the-Art  
facilities*



Orangeburg, S.C.

# Okonite Electrical

## Production Testing at Orangeburg, SC

State-of-the-art production test facilities in our Orangeburg, SC cable manufacturing plant include AC & DC voltage tests along with partial discharge testing and associated discharge site location. The new test facility uses proprietary construction techniques to ensure that ever-present electrical background “noise” does not affect partial discharge measurements.



Control console for partial discharge and site location testing.



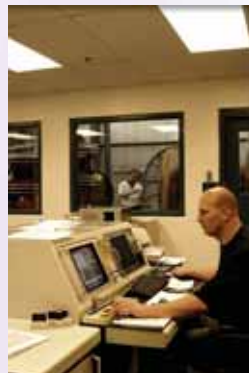
Dimensional check of a cable cross-section using a computer controlled optical comparator.

# TEST

# facilities



Okoguard insulated cable being terminated for test by removing the semicon layer.



High voltage AC Transformer Control console.



Multiple test pens allow efficient facility testing.



# Okonite Electrical

## Production Testing at Richmond, KY

In addition to possessing equipment identical to that in our Orangeburg Plant, Richmond's new test laboratory implements the same QA/QC process and testing protocol. De-ionized water terminals are used for testing of 69kV and 138kV Okoguard insulated cables manufactured at this plant.



Water tank testing of railroad signal cable.



Preparing cable terminations for testing.



Control console for high voltage AC, DC and partial discharge testing.

# TEST

## facilities



Performing AC voltage widthband test on 69kV Okoguard insulated cable utilizing de-ionized water terminations.



Voltage tests completed on three reels.

# Okonite Electrical

## Production Testing at Santa Maria, CA

The Santa Maria plant services our West Coast customers with the same advanced test equipment used at our other plants. With the completion of recent construction, this location has the newest test facilities within The Okonite Company.



Cables awaiting partial discharge testing.



Documentation of data prior to testing.

# TEST

# facilities



Connecting a cable to a coupling capacitor/filter for partial discharge testing.



Tank testing of multiple non-shielded cable reels.



# Okonite Electrical

## High Voltage Test Lab, Paterson, NJ

Our High Voltage Cable Development Laboratory evaluates and qualifies both solid and laminate dielectric cables. This Laboratory is equipped with 600kV and 800kV series-resonant AC test transformers, ratio-arm and Schering dissipation factor bridges, and DC hi-pot voltage test sets to 400kV. Additionally, it houses a Marx-type impulse generator with 1300kV impulse and 1050kV switching surge capabilities.



Okonite Research Engineers inspect the 600kV series resonant AC transformer.



Installing an Okoguard cable into de-ionized water terminations for AC breakdown Test.

# TEST

# facilities



Impulse generator.



800kV series resonant AC transformer.

# Okonite Electrical

## Long Term Testing

Both AEIC Accelerated Water Treeing (AWTT) tests and Accelerated Cable Life Testing (ACLT) are performed on a continuous basis. Although current specifications for shielded power cables require minimum water tank testing, Okonite routinely conducts tests on a continuing long term basis to ensure accuracy.



Model cables under test to determine DC characteristics of fluid impregnated paper/polypropylene paper laminate.



Typical ACLT test tank.

# TEST

# facilities



Okoguard and Okonite EPR insulations undergoing long term wet electric stability tests at temperatures from 25C to 90C.



One of the several AEIC "Treeing" test set-ups.

# Okonite Electrical

## Low Voltage Test Lab, Paterson, NJ

Constantly focusing on improving and developing new compound for insulations and jackets, our Low Voltage Test Laboratory has the ability to evaluate candidate formulations on small wires manufactured on a pilot extruder dedicated to that purpose. Evaluation includes air oven, water immersion, impulse and AC voltage breakdown tests; long-time dissipation factor, insulation resistance and capacitance measurements are also continuously being made to monitor electrical characteristics.



Paper, Laminate and dielectric fluid testing lab.



Impulse testing of small wire.

# TEST

## facilities



AC breakdown of railroad wire.



Preparing small wire for long term water immersion testing.



IEC 60331 Circuit Integrity test on Okotherm CIC cable.



# District Offices, Manufacturing Plants & Service Centers



\*Ashton, R.I.



\*Orangeburg, S.C.



\*Orangeburg, S.C - Compound Facility



Paterson, N.J.



\*Richmond, Ky.



\*Santa Maria, CA.

\*Qualified to provide nuclear Products

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*Okonite cables...A Higher Standard!*