



**KINECTRICS**

# Distribution Equipment Failure Analysis (DEFACS)

Prevent Dangerous and costly Equipment Failures



Kinectrics meets our energy sector clients' needs with advanced electrical consulting engineering solutions aimed at improving safety and reliability.

Our DEFACS services provide FAST, accurate analysis of Distribution equipment failures, root cause identification, confidential results, and effective recommendations to prevent dangerous, costly reoccurrence.

## **GAIN EFFECTIVE CONTROL OVER EQUIPMENT FAILURE**

Distribution equipment failures do occur. Too often these failures have the serious consequences of compromised safety, higher operations costs, degradation of power supply reliability, and increased customer complaints. Utilities need to know whether failures are isolated occurrences or indicative of system-wide problems. Dealing with equipment manufacturers and insurance companies on an equal footing on warranty claims and personal injury issues requires skilled in-depth understanding of failure events. Proper failure analysis requires specialized equipment and facilities as well as experience and expertise to understand Distribution system stresses, effectively determine the root cause, and address potential recurrence.



## **COMPREHENSIVE EXPERTISE AND FACILITIES**

Kinectrics has the expert capabilities and facilities to meet all the failure analysis and diagnostic needs of distributing utilities. Our state-of-the-art technology and long-term (over 25 years) experience in failure analysis and forensic diagnosis has achieved international recognition. Kinectrics' skilled team of engineers and technologists has played a key role in the development of national industry-wide standards, developing and specifying Distribution equipment requirements, as well as establishing application limitations. We know Distribution equipment and the physical environment in which it must function.

To further extend and support our failure analysis service, Kinectrics offers clients access to world-class High Current/High Voltage laboratories for investigative and/or follow-up testing. Our services are complemented by chemical and material laboratories for in-depth assessments and investigations.

## MAJOR UTILITIES SERVED

In the Distribution area, Kinectrics' staff has accumulated over 100 man-years experience in failure analysis of all kinds of Distribution equipment. Our long-term clients include major utilities and industries throughout North America.

## COMPLETE COVERAGE OF DISTRIBUTION COMPONENTS

Kinectrics' broad expertise and unique facilities allow us to analyze a full range of Distribution system components.

We have conducted failure analyses on:

- Pad-mounted, submersible, and pole-top transformers
- Fuses, cutouts and sectionalizers
- Circuit breakers and reclosers
- Capacitors and regulators
- Switchgear – overhead and underground
- In-line and non-loadbreak switches
- Cables, URD splices, SICs, and terminations
- Crimped and automatic splices
- Grounding connectors and systems
- Wood poles, pole fires
- Conductors, insulators and pole hardware
- Meters, PTs and CTs
- Lightning arresters and lightning related failures



## THE ADVANTAGE OF QUALITY TECHNICAL SUPPORT

With Kinectrics you gain the advantage of fast, expert, professional support to effectively resolve any equipment failure situation. Kinectrics provides:

- Independent root-cause and failure-mode identification
- Effective technical solutions and recommendations developed by professional scientists and engineers working in a long-established, reputable organization
- Fast, dedicated client-focused response. Kinectrics services and products can be tailored to your specific needs, schedule and budget. Ultra-fast response can be obtained by taking advantage of the Kinectrics' DEFACS Retainer Program
- Fully-equipped state-of-the-art laboratory resources



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