

B&A

the forensic engineer

13,200 VOLT CABLE FAILURES CAUSE & ORIGIN DETERMINED

An underground distribution cable network operating at 13,200 volts failed at a hospital facility in New York State. Brosz and Associates was retained to determine the cause and origin of the cable failure. A physical, chemical and microscopic analysis was performed on samples of the cable taken from around the area of the fault. Many contaminants, "watertrees", "bow tie trees" and excessive concentricity of the insulation was found. Poor quality control during manufacture was indicated on this seventeen (17) year old cable. Brosz and Associates forecasted that additional cable failures were expected to occur on this large underground network, and indeed, some eight or nine months later, another failure occurred on the same vintage and type of cable for the same reason on another feeder.

Any facility with cable installations can benefit by a series of diagnostic tests including closed circuit radar, an infrared scan, and a partial discharge scan testing to assess incipient problems and take corrective action before catastrophic failure occurs. Brosz and Associates has the necessary equipment and experience in all these types of cable testing and can provide a profile of cable quality and reliability.

Brosz and Associates currently has forensic cause and origin and loss mitigation assignments in Argentina, Australia, Brazil, Guyana, Mexico, Canada and various U.S. states.

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4900 cases over the last 35 years.