

PASSING THE STRESS TEST

One step in winning a new contract with Alabama Power

Alabama Power is one of 11 U.S. electric and natural gas utilities operated by the Southern Company. In their efforts to provide reliable electrical service to 1.4 million homes, businesses, and industries in the southern two-thirds of Alabama, they must make sure they only use the best equipment possible. One such piece of equipment is a cross-arm that attaches to the power poles and holds the power lines. Ensuring the quality, strength, and resilience of cross-arms can mean the difference between having downed or working power lines during inclement weather or harsh conditions. To guarantee the endurance of the cross-arms they purchase, Alabama

Power requires all new manufacturers to place their cross-arms through a rigorous non-destructive pull-load testing process. The

process begins with engineering drawings, manufacturing of first article pieces, and product testing. To get to the testing phase, it took Muskogee Technology about nine months of business development, networking, and preliminary diligence.

During the non-destructive pull-load testing phase, each potential manufacturer must submit a minimum of two of each manufactured part to Alabama Power. Muskogee Technology (MT) presented a total of six first article pieces, consisting of (3) 60" cross-arms and three (3) 80" cross-arms for non-destructive pull-load testing by Alabama Power Company's Engineering Department. The parts were fabricated as per SES-PD-063 standard from carbon steel using

a combination of processes including use of a horizontal band saw, plasma torch cutting and mig welding. After an initial visual inspection, MT's parts were sent to Calera, Alabama for testing. Alabama Power requires their 80" cross-arms to withstand a minimum of 12,400 lbs and 60" cross-arms a minimum of 16,000 lbs for a 60-second time-period. MT's 80" cross-arms surpassed the test and continued to sustain upwards of 15,000 lbs of pull-load, a level which no other Alabama Power vendor had yet to reach. The pull-load test showed that the 80" cross-arm built by MT had no elongation of holes or any other damage to the welds or product fabrication. Represent-

atives of Alabama Power commented that they had not yet seen other vendors first articles reach that kind of pressure with so little deflection. Though wanting to continue testing MT's parts with even more weight, it was discovered

that the power controllers had burned up in the tensile tester due to the far-reaching weight capacity endured by the 80" cross-arm manufactured by MT.

MT is looking forward to continuing testing, once the machine is repaired in an expected two weeks. Though still in the testing phase, we have full confidence that MT has a bright future for being contracted to produce cross-arms for Alabama Power and ultimately Southern Company in the near future.

Westly L. Woodruff, MT President/CEO commented, "Engaging in the manufacturing of utility distribution products is a primary goal of Muskogee Technology, and has been for the past 12 months, due to its sustained market potential and mass scale of production."

Pictured Below:
80 inch Carbon Steel Cross-arm First Article being tested to withstand 12,400 lbs of pull load



By: Jennifer Chism,
CIEDA Marketing
Manager

