

Short Circuit Analysis



Short Circuit (Fault Current) studies are required to insure that existing and new equipment ratings are adequate to withstand the available short circuit energy available at each point in the electrical system. Fault currents that exceed equipment ratings are capable of extensive equipment damage and are a serious threat to human life. On large systems, short circuit studies are required to determine both the switchgear ratings and the relay settings. No substation equipment, motor control centers, breaker panels, etc. can be purchased without knowledge of the complete short circuit values for the entire power distribution system.

The short circuit calculations must be maintained and periodically updated to protect the equipment and the lives. It is not necessarily safe to assume that new equipment is properly rated.

BENEFITS

- Reduce the risk a facility could face and help avoid catastrophic losses.
- Increase the safety and reliability of the power system and related equipment.
- Evaluate the application of protective devices and equipment.
- Identify problem areas in the system.
- Obtain recommended solutions.

DELIVERABLES

A typical short circuit study includes:

- Short circuit calculations, which highlights any equipment that is ascertained to be underrated as specified
- Suggested modifications to rectify the underrated equipment (trip sizes within the same frame, the time curve characteristics of induction relays, CT ranges, etc.)

The Protective Device Setting and Coordination Study is the suggested follow up on analysis to develop the coordination curves, highlighting areas lacking coordination. Presentation of a protective device study would include a technical evaluation with a discussion of the logical compromises for best coordination.

Promotion Code

ABOUT US



Martin Technical, a division of American Trainco, is a provider of practical services and education for maintenance workers and facilities. Our expert staff combines their real world work experiences of the past with today's technologies and best practices to provide our customers with knowledge to operate their plants and maintenance programs in the safest, most efficient manner possible. And because all our experts have in-field experience, we understand the difference between theory and applications and are able to translate today's complex problems into simple solutions that can be implemented tomorrow.

We have serviced over 40,000 companies and organizations ranging from small private facilities to large manufacturing corporations and everyone in between, including:

- Manufacturing Plants
- Schools & Universities
- Data & Service Centers
- Government & Military
- Hospitals
- Shopping Centers
- Energy & Utility Plants
- Water & Waste Water
- Hotel & Hospitality

PRODUCTS & SERVICES

We specialize in making plants and facilities better, safer and more efficient by providing the following services and products:

Electrical Studies & Testing

- Arc Flash Analysis & Labeling
- Short Circuit Study
- Protective Device & Coordination Study
- Power Quality Audit
- Infrared Inspection

Energy Management

- Energy Audits
- Boiler, Compressor & HVAC Audits
- Energy Management Training

Training

- In House Training
- Open Enrollment Courses
- Webinars
- Online Learning

Training Topics

- Electrical
- HVACR
- Codes & Safety
- Pumps
- Pipe & Plumb
- Hydraulics
- Mechanical
- Maintenance Management
- Power Generation
- Petroleum
- Specialty

Electrical Safety

- Electrical Safety Program Development
- Electrical Safety Audit
- Electrical Safety Training
- Qualified Electrical Worker Assessment & Testing

Maintenance Consulting & Audits

- Maintenance Management Consulting
- Maintenance Audits
- Employee Skills Gap Analysis
- Maintenance Program Development

Testing & Assessment

- EPA 608 Certified Test Center
- Pre-employment & topic knowledge testing
- MTAA Certified Test Center

