

Detailed Services



For almost a half a century Canal has provided electrical design, engineering and service around the clock to the merchant marine, naval and coastguard fleets in Canada, primarily in the Great Lakes Basin. From the heaviest Ice Breaker, the largest Bulker, Warships, Tugs and Research Vessels, Fish Boats, Cruise Vessels and Ferries and from the oldest to the newest, we have been there and kept them moving.

ELECTRICAL ENGINEERING – Short Circuit and Coordination / Arc Flash Studies; we have completed studies for vessels ranging from 6th generation DP Drilling vessels, to ferries, to smaller CCG Vessels.

POWER PLANT RELIABILITY – Our Electrical Engineering philosophy is to improve plant reliability by understanding failure modes and performing failure mode effects analysis (FMEA) studies for integrated equipment. This is in contrast to an individual manufacturers design approach which often focuses on specific elements rather than the integrated system.

INTEGRATION ENGINEERING – We can provide engineering services for integration of various vessel components. We have on site integration experience with various vendor's equipment and understand hook up and commissioning requirements. This would include providing integration drawings, cabling diagrams, schematics and other necessary materials for system understanding.

DOCUMENTATION / DRAFTING – We provide clients with documentation upgrade projects. This can often be digitizing older materials or preparing new packages. We have in house AutoCAD services for converting old drawings sets and creating new integrated documentation packages summarizing various vendors project contributions.

SITE SERVICES – In addition to our typical Site Installation Services we can contribute further to the commissioning phases of projects. We are a fully equipped electrical contractor with the required testing equipment to fully analyze onsite power issues. This includes total harmonic distortion (THD) analysis, Power Plant Wave form analysis, equipment tuning for optimized reliability such as AVR, soft starter / VFD Parameters.

DATA ACQUISITION – We have the equipment required to collect data and analyze offsite. This is quite useful for capturing intermittent power issues. The ability to show power plant performance (kW, kVAR, Hz, Volts, Field Current, Fuel Rack, etc.) allows for commissioning engineers to parameterize controllers to get ideal performance.

PROTECTION RELAY ENGINEERING / CONFIGURATION / TESTING – Our engineering staff perform projects using various forms of Protective Relays. This includes manufacturers such as; GE, Siemens, ABB, SEL. We have familiarity with programming these relays to act as autonomous protection elements or as a part of a larger network using the IEC 61850 standardized communication.

For more information, please contact us at 905-685-9293 or 1-844-814-0620



