

ETOs: Master troubleshooters keep the yacht well-connected



All Systems Go
Jason Robertson

Being an ETO on a super yacht is one of the most exciting jobs in the world. Not only do we get to learn about cutting-edge audio visual, information technology, electrical and bridge navigation systems – we get to install and support these state-of-the-art systems while traveling to far and exotic places around the world. But what exactly is an ETO, and what does it take to be one?

On June 25, 2010, in what is known as the Manila Amendment, the International Maritime Organisation amended the STCW code (Section A-III/6) to introduce the certified position of electro-technical officer (ETO) as a licensed member of the engine department. Sometimes referred to as the electrical engineer or simply electrician, the ETO is in charge of all the electrical systems on the ship. Usually they answer to the chief engineer. Unlike engineers, though, ETOs do not carry out an assigned engine room “watch.” Instead,

they are normally on-call 24 hours a day and generally work a daily shift, carrying out electrical and electronic maintenance, repairs, installations and testing.

An ETO provides captains, chief engineers and owners the assurance that all systems are maintained, upgraded and functioning at all times. It is a multifaceted role in which one is required to be an excellent communicator, a logical thinker and confident around high-profile owners and guests. An ETO is a master of troubleshooting who loves to get down to the nitty-gritty of how stuff works. We are curious by nature, with an insatiable appetite for learning. With ever-changing technological advancements, ETOs must keep pace with the latest and greatest developments – more often than not, we are handed new gadgets and tech that may have just been released to the market, and asked to set up and configure it.

So much of what an ETO does is not understood by anyone else on board. For all intents and purposes, the work we do is invisible and largely unnoticed – until something stops working. Crisis management skills and being prepared

for any eventuality is key when, for example, the internet, phone or TV systems stop working. AV/IT and electrical systems need to be proactively rather than reactively maintained. Much of an ETO’s work can and should be programmed into a well-thought-out PMS (planned maintenance system). Distribution boards, breakers, wiring, insulation, AV/IT logs and backups should be checked regularly. Old equipment should be phased out and upgraded with newer equipment before it fails. Restoration and verification of backups is crucial. UPS (uninterruptible power supplies) should be checked and batteries replaced when required.

Crucial equipment spares should be carried on board. When it comes to critical systems with no downtime permitted – for example, bridge navigation equipment, radio equipment, internet and telecom equipment – backup/redundant systems should be implemented to allow for immediate failover/switchover. The job requires many hours dedicated to maintaining, troubleshooting and resolving technical issues. Working alone, unaided and

unsupervised, is often the case, so being self-motivated, disciplined and driven is necessary for success.

The megayacht sector is growing rapidly, with many large vessels being built and launched over the next two to three years. As technology advances, with more automation and electronic circuits replacing conventional and electrical systems, many companies realize that these systems require an expert to attend them. This is especially true on diesel electric ships or vessels equipped with systems such as dynamic positioning. In addition to an ETO, AV and IT officers may be employed to maintain all computers, servers, satellite and bridge-integrated systems.

In this column we will explore the ETO profession – tips, troubles and takeaways. For career advice and work solutions, stay connected!

Jason Robertson, director at technical crewplacement agency Robertson ETOS (www.robertsonetos.com), has more than 17 years of combined AV/IT and ETO experience on board megayachts. Comment at editor@the-triton.com