



The Worshipful  
Company of  
Shipwrights

## Case Study - Taylor Curtis – Apprentice Marine Engineer (funded 2016-17)

### Energy Solutions

[www.energy-solutions.co.uk](http://www.energy-solutions.co.uk)



Dear Worshipful Company of Shipwrights,

Since my last report my involvement within the company has increased greatly and I have learned so many new skills and developed myself in other areas of the company.

Firstly, I have completed my training module in E-plex where I have done many programming of various types of power control modules and clocks which control every

module on a boat. This training allowed me to gain more knowledge on what E-Plex does and why we use it. Not only have I been involved more with the E-Plex side of things but I have been on site a lot more with the service engineering. One example is when we worked on an experimental boat in Wales where we had to do various testing and installing which was great experience as it allowed me to see how our products function and work with a boats system. My understanding of circuit/wiring drawings have improved greatly which allows me to build more complicated products for clients.

Myself and the other apprentice Chris have also been representing the Company. Recently we both were entered in a marine engineering competition for apprentices in Southampton. For this competition we were given half a circuit diagram and a test rig in which we had to use. In order to win the competition apprentices had to complete three main tasks to gain as many points as possible. The first task was to get the test rig to function correctly and do exactly what the specification asked it to do. In this case we were given a scenario where the test rig was to be used as a (Winch) control device. There were various switches and LED's which needed to be connected to the timers and the correct WAGO terminal blocks in a specific way in order for it to function correctly. The second thing we needed to have was a clear wiring diagram showing what we have done to the test rig. Finally, the last thing that we both had to do in order to gain points was to calculate a volt drop calculation. From these tasks we was able to come up with a wiring diagram which allowed us to get most of the test rig functioning, we was able to isolate the circuit and provide power to the timers and basically set up the controlling side of the test rig. However, we struggled to provide power to the LED's. We also struggled slightly with the volt calculation as it was a new calculation to us. As we did not complete every task to gain the maximum amount of points we did not win the competition. However, for me a Chris this was a good experience as it made us both realise how much we have learned and how good our understanding of circuits and components are.

Most recently I, Chris and other engineers from around the company were sent on a BMET (British Marine Electrical Technician) course. This course was brilliant as we gained so much knowledge on how boats function and how the various products that we build are installed within them. We all passed the course which qualifies us all as British Marine Electrical Technicians which is a well-recognised qualification in the British marine industry.



I look forward to more on site jobs as I enjoy travelling to various locations and seeing the products I build function. Also, I look forward to training in other sectors of the company such as testing and using the CNC machines in the engraving room e.g. laser cutter.