Graduate case study

Siobhan Doole - Analysis Engineer

It is immensely fulfilling working in the energy industry knowing that what you do every day helps ensure the world's future energy supply.

JDR develops and produces bespoke products catering to a variety of applications within the energy sector. Our subsea power cables transport energy generated by offshore renewable equipment (e.g. wind turbines) to sub-stations. Our flexible signal and hydraulic umbilicals provide control and communication networks for the O&G energy industry. We have specialist design, production and testing staff as well as highly skilled technicians who travel the world providing services for our products in the field.

With over 500 staff, there are continuous opportunities to work with and learn from experienced colleagues at all levels, both within your current discipline and throughout the business. In my career I've often found it's the people you work with who make the difference and JDR is filled with diverse and friendly characters who are actively keen for graduates and apprentices to do well.

I joined JDR's graduate engineering scheme to gain practical work experience in a position where on-the-job training and support is provided. Trusted early with work that contributes to active engineering projects, you quickly develop skills while guided by senior staff. As the offices are located at or close to our factories, there are established bonds between production and testing activities and upfront engineering. This collaboration means you become a well-rounded engineer, crucially considering how practical the hardware and products you design will be to make, assemble, test and use as well as fulfilling primary functions. Leading and working within inter-departmental teams allows you to conduct investigations and provide technical advice to drive quality and continuously expand business capabilities together.

I'm fortunate to have had travel opportunities to represent JDR at client and supplier meetings and industry conferences. I've now worked on hundreds of projects for both O&G and renewable applications, and fulfilled project, development, quality and tender engineering functions within my design role. I particularly enjoyed development activities where I was responsible for qualifying new hydraulic components and renewable cores to international standards, and customising mechanical tests of products for project specific applications. Rotating into different departments provided exposure to different roles and inspired me to move into analysis after gaining solid technical knowledge of every product we make.

In my analysis role I create computer models of applications and run simulations to identify product characteristics required such as fatigue resistance and tensile strength. Targeting project specific scenarios means we can further optimise product design and reduce system cost.

As well as mentoring internal graduates and supporting apprentices, JDR also supports my STEM ambassador role in which I have mentored students and hosted tours around our factory to expand awareness of different types of careers students could consider.

Providing technical training externally and internally to staff across all levels has been extremely rewarding. Even during the pandemic lockdown I've had opportunities to share cable knowledge online such as through a public IMECHE tech talk.

JDR's experience in dynamic product design means we are a preferred supplier of custom dynamic power cabling for the next generation of pioneering floating wind projects. It's exciting to work in a company at the forefront of cutting edge developments.

With renewable energy set to expand rapidly over the next few decades, and the demand for energy across the world rising, it has never been a better time for creative thinkers and practical problem solvers to join the energy industry.