Job Title:	Design Engineer for Remotely Operated Vehicle (ROV) Umbilical Cables	**Job Category:**	
Department:	Design	**Job Code:**	
Location:	Hoddesdon, UK	**Travel Required:**	Infrequent
Salary Range:	£50k-60k	**Reports to:**	Principal Engineer ROV

Company Background

Fibron is a major designer, manufacturer and global provider of subsea cables and umbilical systems used for Remotely Operated Vehicles (ROV), offshore energy, diving, seismic survey, defence and other applications. The company has considerable in-house design expertise and manufacturing facilities capable of producing a broad range of cable and umbilical products. Fibron has an established track record that comprehensively demonstrates our ability to design and manufacture cables and umbilical solutions for a broad range of applications in harsh environments.

Fibron supplies products to major operators and contractors globally and places great emphasis on developing strong and long-term relationships with their clients and supply base. The specialist nature of the products that are designed and manufactured enables us to provide robust, unique, innovative solutions to meet the challenging demands of our customers who operate in extreme environments.

Due to the company's continued growth and expansion, we now have an exciting opportunity for an experienced cable designer to take on the position of Design Engineer for our ROV umbilical products.

We are looking for a talented, knowledgeable, hardworking, enthusiastic and highly motivated candidate, who will strengthen our ROV umbilicals design capability. Ultimately this will help us to continue to grow and expand our product portfolio thus cementing ourselves as a market leader.

Hoddesdon is within easy commuting distance from London by rail (closest train station is Rye House) or road (A10 short distance from the M25).

Job Description

We are seeking a highly skilled and experienced ROV cable design engineer to play a key role in the continued development of our umbilical cables. You will be responsible for the design, analysis and qualification (as and when required) of custom electro-mechanical umbilical cables that are critical to the performance and reliability of our customers' ROV systems.

The main functions of the role will be (but not limited) to:

- Leading the electrical and mechanical design of ROV tethers, umbilicals and associated cables (power, comms, fibre optic, coaxial); this includes conductor sizing, insulation and jacket material selection, armouring and overall configuration, to meet the voltage, current and temperature rating of the cable, deduced from the customer's specification and applied electrical theory.
- Writing test specifications and qualification procedures for the umbilical/cable in the relevant, customer-specified scenario; *eg* under tension, torsion, compression and cyclic bending, when needed.
- Providing technical support to the production team during the manufacturing process, to ensure quality and design conformity.
- Investigating and resolving cable-related field failures or performance issues, implementing robust design improvements into future cable designs.
- Supporting the sales department in growing and expanding our ROV umbilicals customer base.

Person Requirements

Required:

1. In-depth knowledge and understanding of electrical theory applied to cable design: voltage stress, resistance and voltage drop, current and current rating, insulation and dielectric properties, and related heating effects in air and water.
2. Skilled understanding of the fundamentals of electrical cable design and construction, including cable geometry, helix angles, lay-lengths, copper specifications and electrical insulation materials.
3. Experience of electrical cable design and/or manufacture, gained with either an umbilical cables manufacturer (for ROVs, subsea oil and gas, diving, seismic or defence applications) or an industrial electrical cables company.
4. The ability to understand and apply mechanical engineering principles to the design of umbilicals: hydraulics (pressure drop, fluid mechanics), material science, stress and strain, and fatigue.
5. Practical knowledge of an engineering and manufacturing work environment, with significant direct experience in electrical cable design and manufacturer, ideally in the design of ROV cables.
6. Proficient in the use of 2D CAD software, preferably Autodesk AutoCAD; proficiency in 3D CAD (Solidworks) would be an advantage.
7. Proficient with MS Office applications particularly Word, Excel and Outlook.
8. Able to solve engineering problems safely, pragmatically, effectively and efficiently.
9. Able to communicate effectively with customers and colleagues.
10. Able to work effectively as a team member with colleagues in sales, project management, supply chain, manufacturing, testing and quality departments.
11. Able to demonstrate the Fibron company values of Safe, Responsible, Open and Inventive.

Preferred:

1. Experience with cable/umbilical design and manufacture.
2. Exposure to systems for control of engineering documentation (SolidWorks EPDM would be an advantage).
3. Exposure to a quality system such as ISO 9001 and experience in corrective action resolution.

Education & Certification

Degree in electrical engineering

or

Degree in an allied engineering discipline, physics, mathematics or applied science with an electrical engineering major or significant electrical engineering bias or supplementary training in electrical engineering

Further Guidance

Please note that this role is not suitable for candidates whose skills and experience are predominantly in electrical or electronic systems design (incorporating electrical/electronic devices), electrical harness design (using off-the-shelf cables) or electrical harness routing and installation design.