

# MARINE TECHNOLOGY

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REPORTER

Interview:  
SEA CON's  
**Craig Newell**



## M T R



# Five Minutes with

# SEA CON



**Craig Newell, SEA CON's VP of Sales & Corporate Business Development.**

This month *Marine Technology Reporter* is pleased to present insights from **Craig Newell**, VP Sales & Corporate Business Development, SEA CON.

**Please provide for us a brief personal and professional background, with insights on how you came to your current position.**

I have been involved in the subsea environment for more than 20 years. I still have fond memories of my early years, starting with the defense division of Standard Telephones and Cables (STC). They developed towed array systems for surface ships and submarines. Working with other businesses in the same sector, honing my skills as an engineer it was clear I had a passion for problem solving and giving the customers solutions that were a perfect fit.

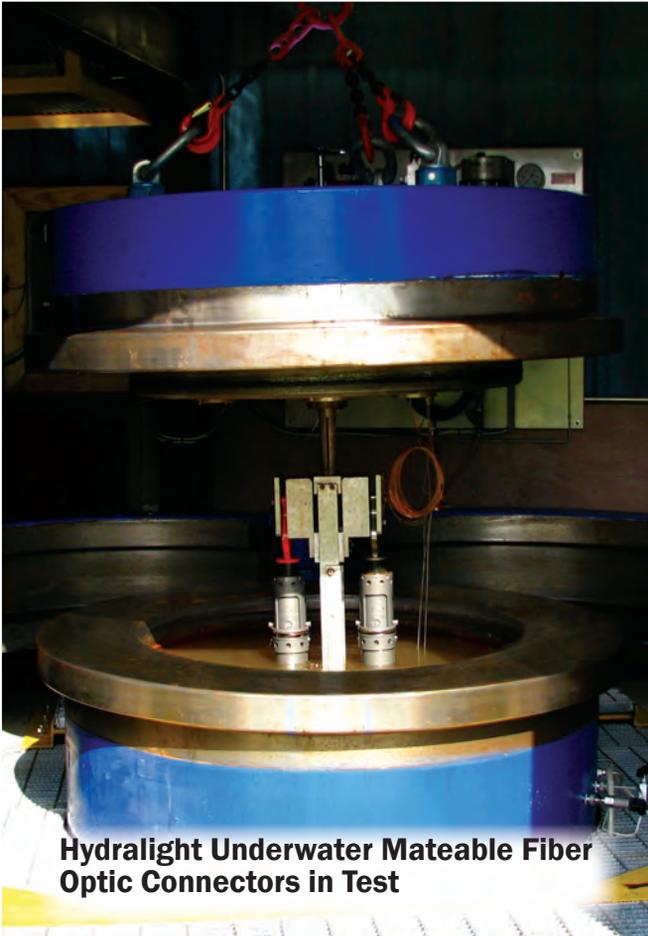
I vividly remember my first involvement with SEA CON. I was working for STC, now Atlas Elektronik UK Ltd (Atlas UK) and we were facing some significant challenges with a project. Added to this was the difficulty in finding a supplier of connectors who was willing to only supply an insert rather than a complete connector. You've guessed it SEA CON was the only supplier we found at that time who not only met the technical requirements, but was willing to give us exactly

what we wanted as we continued to push the design envelope.

My next contact with SEA CON came a few years later when I was the Engineering and Contracts Manager with Electrolytic. We were developing systems for land powered stations and again, I was involved in a step change in design, working on a modular design based around a container concept for a large electrochlorination system. While not subsea we still approached SEA CON to provide a connector system for the instrumentation. Again their support had a significant impact on the project and it almost seemed inevitable that I would eventually join the SEA CON team.

That feeling of inevitability came to pass when I was eventually hired by SEA CON as Technical Sales Manager at their European facility based in the UK. I then moved to Houston, TX in 2004 as Business Development Manager to support the growth of SEA CON, in particular the underwater mateable fiber optic systems being developed by the advanced products division.

My passion for the business and in particular SEA CON and my interests in all things sales and marketing in this highly technical field saw me take the reins of a more efficient centralized sales and marketing team. This eventually led to my most recent appointment as Vice President of Sales and Corporate Business Development in 2009.



**Hydralight Underwater Matable Fiber Optic Connectors in Test**

### **Please give to our readers the executive overview of SEA CON's capabilities?**

• The SEA CON Group has an international footprint which comprises of six divisions positioned in strategically important locations. This footprint gives us the capabilities that include design, prototype, testing and manufacture, with the flexibility to fulfill requirements for large or small numbers as well as project based production orders, all undertaken to reduce costs and increase efficiency.

We have the capability to offer an extensive and diverse range of industry standard or bespoke electrical, optical and hybrid connectors, cable systems and complex distribution harness systems.

Our qualified and experienced design and engineering teams are well known for their capabilities and are able to analyze, evaluate and produce suitable specifications and then use this data to design a product to meet the needs of our clients using software at the cutting edge of our industry.

Our mission requires us to constantly invest and develop our manufacturing capabilities mainly through our people, hardware and software. This constant development gives us the ability to produce high volume connectors in a vast range of

specifications and materials. We continue to develop and each step we take sees the production of more advanced products in increasing quantities. The key to this continuing success is partially due to our ever expanding machining capabilities. Recent examples include the purchase of the latest CNC machines. The success is also down to a dedicated team of engineers using the latest and best software, allowing for the production of complex components for our products.

Our capability also lends itself for the production of parts in large numbers with exceedingly high levels of accuracy using materials such as Stainless Steel, Bronze, Titanium, Monel, Inconel, Nitronic, Elgiloy and Plastics such as PEEK (Polyetheretherketone).

On the East Coast of the United States we have a specialist manufacturing facility that allows us to manufacture and supply a wide range of glass to metal sealed, MIL-SPEC and harsh environmental connectors.

Another important aspect of our capabilities includes the significant investment made in test equipment, which helps to build customer confidence in the safety and reliability and fit for purpose status for intended use. Our testing capabilities include pressure cycling up to 20,000 psi, electrical, optical, accelerated life, gas leak, cold water, sand, silt and full mechanical, environmental, vibration and tensile strength testing.

SEA CON is also focused on providing its customers with the infield support that is so vital in many of the verticals in which we operate. With our highly qualified and trained technicians, we have the capability to provide immediate and professional responses to any service requirement in any location.

It is these capabilities, twined with our desire to develop beyond the now and our passion to push the boundaries of innovation for our customers that enable SEA CON to be a world leader in the supply of connectors, cables and distribution systems.

### **When you look at the expanse of your operations, what do you count as the primary strength of your company?**

• From my first contact with SEA CON some 20 years ago to the projects I work on today, I would have to say the primary strength has been the ability and willingness to do whatever it takes within the bounds of our core values, to develop and support solutions that match the needs of our customers perfectly. This can be from a range of possibilities such as modifications to a connector from our standard range, to the development of a new connector to meet a technology gap within an industry.

SEA CON has always and will continue to provide customers with one of the widest ranges of connector solutions that have created the industry standard, such as the rubber molded dry-mate connectors (commonly known as Marsh & Marine connectors), Metal Shell and Mini-Con Series of high density connectors, the wet pluggable Wet-Con and Micro Wet-Con

connectors, through to the highly specialized Field Installable MUX connector solutions. We also count amongst our key strengths the industry leading underwater mateable HydraLight fiber optic connector system.

This is really only part of the bigger story surrounding the key strengths of SEA CON. In addition to our standard range of products we are also on a journey of constant review and innovation where our customer requirements are concerned. Where it is not possible to deliver a standard solution, we will develop one that fully meets with their specific requirements.

This capability to meet needs, even when the need cannot be met by a standard solution, comes from the multiple divisions within SEA CON. Each division has a specific product focus, but also increases its reach through its own engineering and development expertise, allowing it to modify, innovate and combine to address the customers needs. The final part of this advantage is our capability to pool resources across the divisions to look for new solutions.

### How is your company investing today?

SEA CON has always taken a serious approach towards investment, the amount of time, effort and resources we place in our development of products, as well as the services we provide our customers. We see this as a vital component to our overall corporate strategy.

A key area for investment is to expand and develop the use of

fiber optics. A good example of this is the developments made a few years ago after identifying the need for a hybrid optical/electrical connector as an off the shelf product. This led the business to develop the Opti-Con connector range available in five main shell sizes with channels configurable to either optical or electrical, or even blanked out if not needed. Until Opti-Con became available, the hybrid connectors were selected from existing configurations. When this was not available tooling manufacture was required which led to lead-time and cost impacts.

Fiber optics remains one of our leading focuses for investment. Most recent has been the development and qualification of the SEA CON Precision MKII hose conduit. This together with the development of a Subsea Umbilical Termination Assembly (SUTA), has enabled SEA CON to be in a position to supply complete systems solutions for the subsea control market.

### What new products/systems have you recently launched (or will soon launch) that you deem important for this sector?

SEA CON is not a business known for standing still and so in recent times we have launched a number of new and modified products and into the future we have established plans to continue to push the boundaries through modifications, innovations and new products. Our divisions give us the

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A prime example of this is SEA CON's commitment to supporting the use of fiber optics within the Oil & Gas industry through the development of dry-mate optical products, including the MINI-CON and OPTI-CON connector series, the underwater mateable HYDRALIGHT connector and even the down-hole multi channel fiber optic G3 connector series. To achieve this broad spectrum of product supply and service, the SEA CON group has six globally located manufacturing facilities, each staffed with highly experienced design/development teams. SEA CON maintains multiple CNC machining departments, routinely manufacturing electrical contacts from 28 AWG to components weighing hundreds of pounds. SEA CON also has several molding departments with a wide variety of composites/elastomers and an in-house glass to metal sealing facility. To complement our design and manufacturing capabilities, SEA CON has extensive in-house test-

ing capabilities that includes, electrical, optical, dimensional, pressure, shock, vibration, axial pull equipment all with experienced staff. To support its product in the field SEA CON provides a 24/7 field service support through its many highly trained field service teams.

### The Tech

SEA CON has been providing products and services to many harsh environmental markets over the years and has been proud to provide some of the most leading edge solutions available in the market. This focus on technology can be traced back many years through products like the ALL-WET connector series. These connectors not only provided the market with the ability to mate electrical connectors 'wet', but gave the flexibility of connecting multiple individual instruments, lights, etc into a single interface connection point on a control pod with the further development of the 'Split' ALL-WET connector range. As markets change SEA CON has adapted existing products to meet market needs. The MSS Range has been one of the main product lines for SEA CON, providing high contact density and a variety of power and signal configurations. This series has also provided SEA CON with the ability to meet the requirements of API-16D standards with the inclusion of 'test ports' at seal interfaces.



**G3 Wet-Mate, Down Hole,  
Fiber Optic Connector**



**SEA CON®'s High Density  
MINI-CON Connector Range**

ability to produce a truly diverse range of products, some that are worthy of mentioning are as follows:

The first is the expansion of the capabilities of the industry leading HydraLight connector series, with the release of the APC version of this series. This version enables the HydraLight to meet the back reflection needs as we are seeing for sensing systems. In addition to this we have also released the high fiber count HydraLight which provides up to 48 fiber optic channels within the same basic envelope of the standard HydraLight connector.

We have also seen developments in the use of fiber optics within the OEM market. SEA CON has recently introduced numerous high specification optical, electrical, coaxial and hybrid connectors developed to meet the always expanding technical requirements of OEM manufacturers; one of the main challenges being to provide these capabilities within the smallest possible connector.

### **Over your career, what do you consider to be the leading technological developments that have most impacted your business?**

I know fiber optics have been around in our industry for many years now, but it has only been more recently that I have seen the use of fiber optics as the main stream communication system. As a business we feel this trend will continue to grow and with it the technologies. Fiber optics will not just be used as the backbone communication line, but also throughout all elements of subsea control systems.

It is with this vision that SEA CON has not only developed new fiber optic products, but also looks to fill technology gaps that exist within the market. A good example of this being SEA CON were the first to provide a multichannel (6 channel)

wet-mate down hole fiber optic connector, our third generation (G3) connector.

With the expansion of use and projected future market, SEA CON has extended its manufacturing reach in fiber optics so that all 6 manufacturing locations have the capability and are actively involved in the manufacture of fiber optic products.

### **What technology or trend in the way in which your products are used do you feel will most impact your business in coming years?**

Fiber optics will, without doubt, continue to be one of the technologies that will impact our business in the coming years. Particularly for oil, gas and defense, due to all the exciting developments in these sectors we are witnessing.

We are also seeing a need for high power connection systems. While initially this need was being driven by the push for subsea processing, in recent years this has also been driven by the growth of renewable energy developments.

SEA CON has been involved in a number of important renewable energy projects utilizing our standard products such as the Sea-Mate connector series as well as the HydraLight underwater mateable fiber optic wet-mate. In addition to these connectors, we are also seeing an increase in the need for high power. Many of our competitors have gone with the standard oil and gas connector solution utilizing these connectors for this market, however SEA CON has taken a more pragmatic route, based on reviewing the market needs and predicting future needs. We have concluded that both the operational and environmental conditions vary considerably from the oil and gas subsea markets and lead us to consider a range of alternate more innovative potential solutions.