



SEA CON[®]
UNDERWATER ELECTRICAL AND FIBER OPTIC CONNECTORS

Newsletter

Celebrating 40 Years...

...in Underwater Connector Technology

WINTER 2007/8

EDITORIAL

Welcome to the Winter 2007/8 edition of the SEA CON[®] Newsletter.

2007 has been a very busy year for the Group with a continued increase in new orders and new connector developments. The demand for new and existing products has resulted in many of SEA CON[®]'s divisions expanding their manufacturing facilities to enable them to continue providing the same high quality products to meet ever tighter delivery schedules.

This year saw the release of the GLOBE-CON, a small diameter connector specifically designed for a major offshore development project. Other product developments include the MIN-D and MIN-E connectors and the new rubber molded 'T' connector produced for in-ground installations.

The SEA CON[®] group has been involved in many exhibitions this year including OTC which marked the start of the Group's 40th Anniversary celebrations. In addition SEA CON[®] exhibited at a number of shows including UDT in Italy, Oceans in Canada and Offshore Europe in Scotland all of which were very successful for the Group with many new inquiries received. During 2008, the Group will be exhibiting at a number of exhibitions including Underwater Intervention during January and Oceanology in London during March, with many more events planned throughout the New Year. For more information, please see the Events Section of this newsletter.

SEA CON[®]'s continued growth has resulted in the need for new personnel in all disciplines across it's 4 divisions. Since May, SEA CON Advanced Products, LLC has increased it's employee numbers from 42 to 61. In addition, SEA CON Global's opening of a further manufacturing facility also resulted in the need for many new production personnel.

In November SEA CON[®]'s manufacturing facility in El Cajon was awarded a Facility Certification from the Navy's Submarine Maintenance Engineering, Planning and Procurement (SUB-MEPP) department. This award means that SEA CON[®], El Cajon is 1 of only 4 approved vendors for the fabrication, molding and inspection of



Offshore Technology Conference (OTC) 2007

connector plug assemblies for submarine out-board cables. Further details can be found in this newsletter.

We hope you enjoy reading this newsletter and would welcome any comments that you wish to make. If you would like to receive further information on any of our products or services, please contact us at:

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GLOBE-CON Connector Series

New Product Developments



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MIN-D/MIN-E

Responding to customer requirements for smaller high reliability connectors, SEA CON® has recently introduced two new shell sizes to its extremely popular MINI-CON series.

The new MIN-D and MIN-E connectors fulfil the need for small diameter and light weight connectors whilst maintaining the design qualities of the well established MINI-CON range.

With many key features including proven reliability and a pressure rating of upto 16,000 psi, these connectors are suitable for many applica-

tions such as ROV systems and diver communications and have been subjected to a number of additional tests including:

Environmental

- Salt Spray (Corrosion) in accordance with MIL-STD-202, Method 101.
- Humidity (Steady State) in accordance with MIL-STD-202, Method 103.
- Thermal Shock - in accordance with MIL-STD-202, Method 107.
- Hydrostatic Pressure - in accordance with MIL-STD-1344, Method 1006.

Physical

- Underwater Explosion shock in accordance with MIL-S-901, High Impact, Heavy Weight.
- Vibration (Mechanical) in accordance with MIL-STD-167, Type 1.

Electrical

- Dielectric Withstanding Voltage in accordance with MIL-STD-202, Method 301.
- Insulation Resistance in accordance with MIL-STD-202, Method 302.



MIN-D and MIN-E Connectors

CAT 5e Ethernet Connector Update

SEA CON (europe) Ltd's CAT 5e Ethernet connector has successfully undergone independent testing.

The connector displayed 1 Gigabit Ethernet capability with no losses. Internal testing conducted by SCE technicians showed no loss in performance when connected to a standard telephone line or connecting a computer to the internet.

The CAT 5e is housed within a MINI-CON shell and is available in standard 316L Stainless Steel or Titanium. Key features include compact size and weight, high pressure rating of upto 7,500 psi (approximately 16,900ft/5,200m) maximum working pressure and fast Ethernet transfer of information with reduced interference and cross-talk.



CAT 5e Connector Series

New Rubber Molded 'T' Connector Series

SEA CON Global has developed a splash proof connector specifically for in-ground installations.

This new rubber molded 'T' connector utilizes some of SGP's existing connector technology by incorporating extended Micro WET-CON sockets and 3 key ways to avoid mis-alignment when mounting the bulkhead. Designed for installation under asphalt, this series is currently being used on lights for crosswalks. For further information please contact SEA CON Global Production at sales@seaconglobal.com

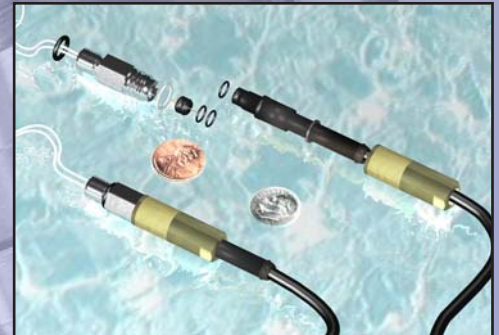


New Rubber Molded 'T' Connector Series

GLOBE-CON Underwater Electrical Dry-Mate Connectors

SEA CON® is pleased to announce the release of a new connector range.

Originally developed for a major offshore development project, the GLOBE-CON series is a small diameter, dry-mate, metal shell connector. The Bulkhead Connector Receptacle (BCR) is manufactured from 316 Stainless Steel with a GRE (Glass Reinforced Epoxy) insert utilizing gold plated contacts and Viton o-rings. The Cable Connector Plug (CCP) is molded in Neoprene to standard or custom cable lengths upon request, although other component materials are available for high temperature and high pressure applications. This connector design also houses a spring ring which prevents the engaging nut from loosening under vibration.



GLOBE-CON Connector Series

The GLOBE-CON series is currently available in 2 shell sizes with up to 12 contacts, however more configurations are due to be added to the range at a later date. Sturdy and robust, this connector has the ability to withstand temperatures of upto 140 degrees Fahrenheit with a pressure rating of 10,000 psi (22,500ft/7,000m) making it suitable for many applications including ROV's, Underwater Cameras, Telecommunications or Broadcasting Systems, Sensors, Digital Data Transmission and Acquisition.

The GLOBE-CON series has undergone complete Qualification testing including:

- Insulation resistance testing at >200 meg-ohms @ 300 VDC.
- Pressure testing to 10,000 psi.
- Durability testing with 250 mate and de-mate cycles with no change in resistance or IR readings.

For further information please contact SEA CON Global Production at sales@seaconglobal.com



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Company News

SEACON Advanced Products, LLC Update



SEACON Advanced Products, LLC

SEACON Advanced Products, LLC continues to grow at a rapid pace and has become a full service facility catering to the Houston Oil & Gas markets.

The division now has over 60 employees with a continued expansion programme of it's manufacturing facility planned over the next 3 years.

The division's main product line is the HYDRALIGHT fiber optic wet-mate connector. Selling in excess of 760 units, the HYDRALIGHT continues to gain acceptance by operators due to it's superior performance and reliability and offers the following benefits.

- Manufactured from Titanium for weight and strength.
- The optical performance of the connectors (both insertion loss back reflection) is maintained over the 100 mate/de-mate lifecycle when mating 'any' bulkhead to 'any' receptacle.

- The optical performance is:-
Insertion loss: Average over 5,000 measurements is -0.2dB, single Standard Deviation (SD) is 0.1dB
Back Reflection: Average over 5,000 measurements is 50dB, single Standard Deviation (SD) is 4dB.
- The external and internal components are manufactured from corrosion resistant materials and are fully seawater compatible. The connector is designed to operate (mechanically and optically) if flooded with sea-water making it robust for all ROV, Diver and Stab-plate operations and has a service life of 25+ years.
- Elastomers used are a compound of fluorosilicone and have been selected and qualified due to their high resistance to most mineral based oil's and chemicals.
- There are only two main moving parts during the mate/de-mate cycle which move linearly providing a simple yet reliable connection operation.

For further details on the HYDRALIGHT please contact SEACON Advanced Products, LLC at sales@seacon-ap.com

SEA CON® El Cajon Receives Prestigious NAVSEA S9320-AM-PRO 020/MLDG Approved Vendor Certification

SEA CON® El Cajon has recently been awarded a Facility Certification from the Navy's Submarine Maintenance Engineering, Planning and Procurement (SUBMEPP) department.

This certification means that SEA CON® El Cajon is 1 of only 4 approved vendors for the fabrication, molding and inspection of connector plug assemblies for submarine outboard cables built in accordance with the NAVSEA Technical Manual (PRO 020).



SEA CON® Certified PRO 020 Team

In order to gain certification, SEA CON® had to meet a number of environmental requirements as outlined in the PRO 020 Manual. To meet these requirements an environmentally controlled Polyurethane Laboratory was built at SEA CON®'s facility which has been dedicated to the manufacturing of assemblies in accordance with the requirements of the manual. In addition, facility certification also included individual employee certifications which involved a thorough and detailed NAVSEA approved training program and a rigorous qualification and certification/re-certification program which were based on techniques and procedures outlined in the Manual. SEA CON® assigned a team of 10 highly skilled technicians who attended over 10 days of training which included Specification and Procedures Familiarization, Military Standards, Safety Precautions including Ventilation, Personal Protective Equipment (PPE) and Electrical Equipment, Waste and Environmental Controls.

Part of the fabrication training included presenting samples to NAVSEA auditors and in-class training included Cable Inspection, Traceability and Positive Material Controls to Final Inspection and testing of the fabricated harnesses. As part of the facility audit, the NAVSEA Team witnessed the actual assembly, molding and inspection of parts.

SCE's Machine Shop Expansion

To cope with the continued increase in customer orders, SEACON (europe) Ltd has expanded it's in-house machine shop.

The increase in floor space to 17,000 sq.ft. has allowed for the purchase of a Mazak 5 axis Turning Center and a Hurco 3 axis Machining Center to compliment our existing Mill/Turn centers which will also enable us to produce mould tooling in-house. This, coupled with the employment of new operators will increase our machining capability and output.



SCE's Machine Shop

Company News



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Forth Coming Events



UNDERWATER INTERVENTION 2008

www.underwaterintervention.com

New Orleans, LA
Jan. 29 - 31, 2008
Booth #903



DEEP OFFSHORE TECHNOLOGY 2008

<http://dot08.events.pennnet.com>

Houston, TX
Feb. 12 - 14, 2008
Booth #429



PUMPER AND CLEANER EXPO 2008

www.pumpershow.com

Louisville, KY
Feb. 27 - Mar. 1, 2008
Booth #6143



SUBSEA TIEBACK 2008

<http://stf08.events.pennnet.com>

Galveston, TX
Mar. 3 - 5, 2008
Booth #107



OCEANOLOGY INTERNATIONAL 2008

www.oceanologyinternational.com

Excel, London
Mar. 11 - 13, 2008
Booth #654



OFFSHORE TECHNOLOGY CONFERENCE

www.otcnet.org/2008

Reliant Center, Houston
May 5 - 8, 2008
Booth #4153

New Personnel

SEA CON (europe) Ltd is pleased to announce that Nick Harvey joined the company's Production Department at the beginning of the year as Production Expeditor.

Nick has 15 years previous experience in manufacturing and his role at SCE will include liaising directly with both customers and suppliers to further improve production performance. Nick will also be tracking and monitoring customer orders from receipt through to production and completion to ensure that we continue to provide new and existing customers with the same high quality products with on time deliveries.



Nick Harvey

Also in this year Joanne Betts joined SEA CON (europe) Ltd's internal sales team and Malcolm Hughes took on the role of Technical Sales Manager. Prior to his new role, Malcolm spent many years as Production Manager and his product knowledge will prove invaluable in specifying products for customer applications.



Joanne Betts



Malcolm Hughes

SEA CON Global Opens New Manufacturing Facility

In the 18 years since it was established, SEA CON Global Production has become the main rubber molded and composite connector manufacturer within the SEA CON® Group.

Their standard product range includes the Marsh & Marine Rubber Molded and Glass Reinforced

Epoxy (GRE) connectors in addition to the ALL WET/WET CON, Micro WET-CON, HUMMER and the newly released GLOBE-CON series. In addition to their standard product range, SEA CON Global Production also has the engineering and technical capability to produce special custom made assemblies for specific requirements.



SEA CON's President, Mr. Pat Simar Opening the New Facility

The continued success and expansion of this division has resulted in the addition of a new 12,000 sq. ft. manufacturing plant. This new facility located in the suburbs of the city of Xalapa in the State of Veracruz, Mexico was officially opened by the Group's President, Mr. Patrick Simar at the end of April 2007 and has enabled SEA CON Global to increase production output from 6,500 to 7,500 parts per week.

IPC Certifications Awarded

Art Knox has once again successfully completed and passed the IPC/EIA J-STD-001D (Joint Industry Standard, Requirements for Soldered Electrical and Electronic Assemblies) course.



Art Knox

Re-certification takes place every two years and enables Art to train and certify all technicians in-house.

SEA CON (europe) Ltd is also pleased to announce that Shaun French (Quality Manager), Mark Wadhams (Production Supervisor - Subsea Workshop), Kevin Steward (Production Supervisor - PU Workshop) and Brian Patterson (Production Supervisor - 55 Workshop) have successfully completed the IPC/WHMA-A-620 Certified IPC Trainer Certification and Re-Certification course. The IPC/WHMA-A-620 is the industry standard for cable and wire harness fabrication and installation and will further enhance quality and production. Certification has also allowed for internal training of all Quality and Production personnel to Specialist level.