## **Technical Insight: Universal Jointing Training**

The Universal Joint and UQJ Construction Manuals provide detailed instructions on the construction methods, critical measurements and necessary checks for correct joint construction. These construction manuals are updated on a regular basis and published quarterly on the UJCM 'Explorer' which is available, by application for an annual subscription. However, the manuals do not replace the need for training in the complex techniques required for assembling joints that will exhibit the required mechanical and electrical integrity and optical transmission performance necessary for 25 vears' operational life on the seabed.



Each of the UJ Consortium Members operates a Jointer Training School to train its own jointers and, upon request, those of its customers. New techniques are transferred directly to the UJ Consortium Training Schools by the respective Design Authorities, ensuring that there is consistency and a common understanding across the UJC member's schools.

UJ/UC and UQJ training comprises a balanced combination of instruction, demonstration, practice and simulated operational jointing. Lectures, demonstrations, coaching and instruction sheets are all used to back up practical jointing element assembly and full joint construction sessions. Each course is designed so that jointers, once qualified, not only have the necessary skills and experience,

but will also understand the reasons behind the adoption of specific techniques used to construct joints in order that they will comply with the product design and specification.



The quality management systems of all of the UJ Consortium Training Schools comply with the UJ Consortium's common UJC Training Standard and they apply rigorous measures to ensure that training of the highest quality is provided. UJC Training Schools use the same equipment as used on board the cable ships and apply the same quality measures as are applied to operational joints.

Once qualified, operational jointers, in order to retain their qualification status, are required to attend a re-qualification course every two years to demonstrate their understanding and competence in existing techniques. During the re-qualification course they will be updated on any changed techniques, adding any new ones pertinent to their need and re-testing the jointer to ensure that best jointing practice is still being applied and that no bad habits or short-cuts have been adopted since their initial training.

For the safe and reliable construction of joints, the UJ Consortium strongly recommends that cable owners check the qualification status of jointers who will work on their submarine cable system(s) to verify that they have been appropriately trained and are currently in qualification as certified by a UJ Consortium Training School or one that is formally linked to a UJC Training School.