

## Product & Service Datasheet

Subsea Power Cable  
& Umbilical Factory Splicing /  
Joining Service (MV & HV)

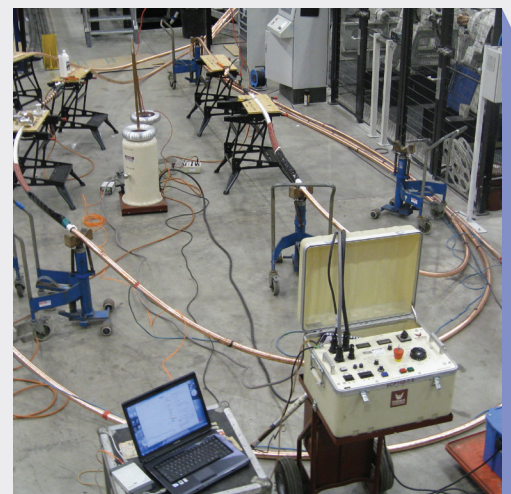


## Applications

To enable the manufacture of long continuous lengths of subsea power cables and umbilicals, required for many oil & gas and renewable energy projects, it is necessary to joint or splice together shorter lengths of power cores during the cable assembly ('lay up') process.

These factory joints must be similar in diameter and flexibility to the power cables being spliced.

Power CSL offers its factory splicing services for medium voltage (MV) and high voltage (HV) power cores to subsea power cable and umbilical manufacturers on a global basis.



During manufacture, installation and in service, submarine cables and umbilicals are subjected to mechanical and hydrostatic forces not encountered by conventional underground cables. It is essential that the splices match or surpass the mechanical, hydrostatic and electrical requirements of the finished cable, and that they are reliable for the life of the subsea system - often up to and beyond 25 years.

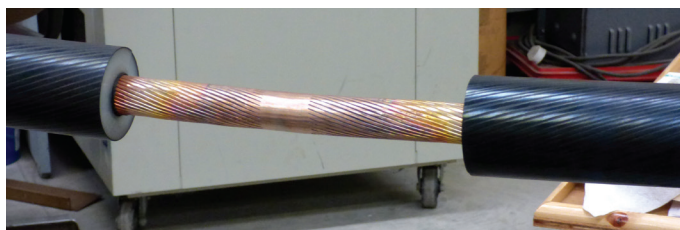
The jointing methodologies employed by Power CSL extend over 30 years and these techniques have been used to install more than 2,500 power core splices in oil & gas and offshore renewable energy cable links around the world. Power cables and umbilicals containing Power CSL splices have been deployed in a range of water depths, from shallow near-shore renewables applications to ultra-deep (up to 3000m) subsea oil production systems.

Whilst the splicing process is most commonly applied at the lay-up stage of cable manufacture, Power CSL has also developed techniques for splicing power cores after lay-up, for jointing of power core triads (which are in turn laid up into more complex umbilical assemblies), and even for jointing of completed armoured cable.

The production of long length subsea cables and umbilicals is challenging, even for very experienced manufacturers. Should the power cores be damaged at any stage of the assembly process Power CSL's proven factory splicing technique can repair the affected section, avoiding the immense cost of re-making the entire subsea cable length.

Power CSL's expert engineers and technicians are deployed to clients' factories around the world to provide this service. It is highly specialised work that can, if required, be undertaken at the dockside.

Please contact us to discuss your particular project factory splicing / jointing requirements.



### Key Features

- Applicable to MV and HV power cores
- 25mm<sup>2</sup> – 1200mm<sup>2</sup> conductor size range
- High retention of original tensile load capability of conductor
- Maintains original power core approx. dimensions
- Each splice subjected to electrical testing - High Voltage withstand and partial discharge measurement at mains frequency
- Each splice subjected to radiographic examination of conductor joint and insulation reinstatement
- Techniques available for factory splicing of single cores and laid up triads
- Techniques available for repair of power cores damaged during cable manufacture
- Service offered on a worldwide basis



#### POWER CSL

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