

Calculation of shear rate for strand filling compounds in High Voltage XLPE Submarine Cables

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If a cable damage occur on the seabed, it is important that submarine XLPE extruded cables withstand penetration of water through the conductor. Consequently the conductor is filled with a water blocking compound between the strands. The strand sealing process in the cable manufacturing is a critical step in order to get all strands sealed from each other, and that no excess of material is squeezed to outside of the conductor, to avoid contact to the inner semicon and insulation under extrusion. XLPE cables consisting of two main conductors, profile or round strands which demands different type of strand block sealing materials.

The poster is going to be focused on: Simulation study of shear rate seen inside the stranding/filling stations and calculations of shear rate for applying of strand sealing materials.