Submarine Cables Capability

Amplitude is a trusted advisor in the field of submarine power cables, offering end-to-end consulting services for both AC and HVDC systems. Their expertise spans the entire project lifecycle, from feasibility and design through to installation, operation, maintenance, and repair.

Concept Design & Cost Estimation

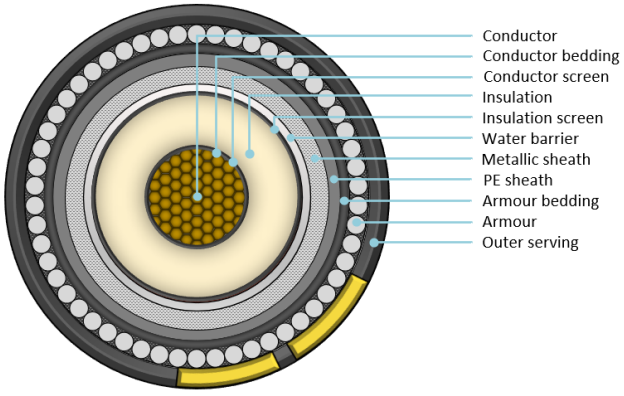
Amplitude delivers efficient and practical cable designs tailored to project needs. Services include:

- Design and rating of polymer, mass impregnated, HVDC, and AC MV/HV/EHV cables.
- Software modelling for various environments and installation configurations.
- Cost estimation for cable manufacturing, transport, and installation.

Cable Burial Risk Assessment (CBRA)

To ensure long-term reliability, Amplitude conducts detailed risk assessments during the route planning phase:

- Qualitative analysis of seabed conditions and route surveys.
- Quantitative risk assessment of marine activities (fishing, shipping, dredging).
- Anchor strike probability and MTBF (Mean Time Between Failures) calculations.
- Recommendations for burial depth and protection measures.



Submarine Installation Planning

Amplitude supports the planning and execution of submarine cable installation campaigns, ensuring efficient and secure deployment.

Testing & Fault Management

Amplitude provides:

- Specifications and witnessing for factory and field testing.
- Advanced fault detection and pinpointing techniques.
- Equipment specification for fault finding and investigation.

Cable Readiness & Repair Planning

A proactive repair strategy is essential for subsea cable projects. Amplitude offers:

- Custom marine cable readiness and repair plans.
- Spare parts strategy, personnel and vessel requirements.
- Fault verification, location, and pinpointing.
- Cable recovery, repair, burial, and reinstatement.
- Post-repair testing, demobilisation, and root cause analysis.
- Repair scheduling and spare replenishment.

Specialised Services

Amplitude also offers a range of complementary consulting services, including:

- Cable technical specification development.
- Owner's engineer services.
- Cable factory auditing.
- Submarine survey coordination and technical assistance.

Please contact bd@amplitudepower.com for more information.