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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 17502-2009

Replacing GB 17502-1998

**Specifications for submarine cable and pipeline route
investigation**

海底电缆管道路由勘察规范

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1 Scope

China's national specification for surveying the route a submarine cable or pipeline will follow. It specifies the content, the methods and the technical requirements of submarine cable and pipeline route investigation, and the preparation of the results report and the archiving of the data. It applies to the siting and investigation of submarine cable and submarine pipeline projects, and may be referred to for other linear seabed works and shallow foundation structures. A submarine cable or pipeline is laid once and is almost impossible to inspect, repair or reroute afterwards at anything other than extraordinary cost. Everything that will threaten it over its life is decided before it is laid, by the route: rock outcrop that prevents burial, mobile sand waves that will expose a buried line as they migrate, soft mud that will not support it, slopes that can fail, active faults, gas-charged sediment, boulder fields, existing cables and pipelines to be crossed, wrecks and unexploded ordnance, fishing grounds where trawl gear will reach the bottom, and anchorages. The survey has to find all of it in a corridor along a route hundreds of kilometres long. The specification sets out the sequence: route preselection on existing data, then the landfall section which is investigated separately because the shallow zone is the most dynamic and the most congested part of the whole route, then positioning and navigation to the accuracy the results demand, then geophysical survey - bathymetry, side-scan, sub-bottom profiling and magnetometry - followed by seabed sampling, geological drilling, in situ testing and laboratory soil testing where the geophysics indicates a problem. It then covers the measurement of corrosive environmental parameters, seismic safety evaluation, the collection and observation of marine hydrometeorological data, and post-lay survey of the installed cable or pipeline. Issued on 30 October 2009 and in force since 1 April 2010, it replaces GB 17502-1998.

This standard specifies the contents of the submarine cable and pipeline route investigation, methods and technical requirements, results report preparation and data archiving. This standard applies to submarine cable project, submarine pipeline project

siting and investigation, other linear seabed, shallow foundation structures and siting Investigation may refer.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 12327-1998 Hydrographic Specification

GB/T 12763.2-2007 oceanographic survey - Part 2. Marine hydrographic observations

GB/T 12763.3-2007 oceanographic survey - Part 3. Marine meteorological observations

GB/T 12763.6-2007 oceanographic survey - Part 6. Marine Biological Survey

GB/T 17424-1998 Differential Global Positioning System (DGPS) technology requirements

GB 17501-1998 marine engineering topographic surveying Specification

GB 17741-2005 project site seismic safety evaluation

GB 50011-2001 Seismic Design of Buildings

GB 50021-2001 investigation of geotechnical engineering

GB/T 50123-1999 standard soil test method

GB/T 50269-1997 Foundation Dynamic Properties Test Specification
ASTMD2487-2006 soil engineering classification criteria (Unified Soil Classification System)

ASTMD5778-1995 soil type and pore pressure measuring probe penetration test standard

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Including submarine cables and submarine pipelines. Submarine cable is laid on the sea bottom for cable refers to communications, power transmission, including undersea cables, Submarine transmission cables, etc; refers submarine pipeline laying in the sea for water, gas, oil or other substances transported tubular facilities.

3.2 Submarine cable and pipeline landing point near the water depth is less than 5m route corridors.

Note. usually extends from shore to land at 100m to the sea to a depth of 5m at.

3.3 Shoreline to a depth of 20m sea routes.

3.4 Depth 20m ~ 1000m sea routes.

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