



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

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**Code for acceptance of telecommunication cable line
engineering**

通信线路工程验收规范

(English Translation)

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1 General

1.0.1

In order to make the construction of communication lines conform to the relevant national policies, achieve advanced technology, reasonable economy, energy saving and environmental protection, and ensure that the materials, construction and completion acceptance indicators in the construction of communication optical (electrical) cable lines meet the design requirements, this document is formulated specification.

1.0.2

This specification is applicable to the acceptance of new land communication line projects and reconstruction and expansion of communication line projects.

1.0.3

The program, specifications, quality, etc. of the equipment used in the project shall comply with the provisions of the approved engineering design documents, and unqualified equipment shall not be used.

1.0.4

When constructing communication lines in areas with seismic fortification intensity above 7 degrees (including 7 degrees) in my country, the seismic performance of communication facilities should be considered according to the design requirements.

1.0.5

In addition to the implementation of this specification, the acceptance of the communication line project should also comply with the relevant current national standards.

2.0.1 Microtubules microducts

Microtube is a small size (its maximum outer diameter is not more than 16.0mm), light weight soft round plastic tube.

2.0.2 Microduct bundles microduct bundles

Microtubule bundles are bundles of microtubules formed by a certain number of microtubules bundled together.

2.0.3 Cable of microduct

The umbilical cable is a cable made of a certain number of microtubes, with an outer sheath, and with certain protective measures (such as a moisture barrier).

2.0.4 Microduct optical fiber cable for in-stallation by blowing

The air-blown micro-optical cable (referred to as micro-cable) is suitable for laying in the micro-pipe by the air-blowing method at the same time. The size is small enough, and its diameter ranges from 3.0mm to 10.5mm. mm ~ 16.0mm optical cable with three conditions.

2.0.5 Closure for microduct optical fiber cables

A protective connection between two or more miniature fiber optic cables.

3.1 General provisions

3.1.1

During the optical (electrical) cable and equipment inspection, the representative of the construction party or supervisor and the representative of the construction party should be present at the same time.

3.1.2

The program, specification, model, quantity, etc. of optical (electrical) cables and other line equipment shall comply with the design requirements. The factory data of optical (electrical) cables, silicon core plastic tubes and other line equipment should be complete, and there should be product quality inspection certificates and product test records submitted by the manufacturer. Line equipment that does not meet the design requirements or does not have a factory inspection certificate shall not be used in the project.

3.1.3

Optical (electrical) cables, equipment and equipment should be visually inspected, the packaging should be complete, and the outer packaging should be marked with the program, specification, model and quantity.

3.1.4

The outer packaging and outer sheath of the cable should be intact, and the packaging of the optical (electrical) cable end and the silicon core plastic tube end should be intact.

3.1.5

The actual A and B terminals of the optical (electrical) cable should be checked during the opening inspection of the optical (electrical) cable, and marked correctly and eye-catchingly on the cable reel.

3.1.6

Optical (electrical) cables and other line equipment should be recorded after inspection.

3.2 Optical cable single reel inspection

3.2.1

The main inspection items for a single-reel optical cable should include retesting the length of the optical fiber, measuring the loss of the optical fiber, and observing the curve of the backscattered signal of the optical fiber.

3.2.2

Optical fiber transmission characteristics should meet the design requirements. The length of the disk should meet the design requirements and match the nominal length of the factory.

3.3 Cable Single Reel Inspection

3.3.1

The main inspection items for single-reel cables should include inspection of defective wire pairs, inspection of sealing performance of cable sheath, inspection of ring resistance of wire pairs, inspection of insulation resistance, and withstand voltage inspection.

3.3.2

The chromatogram or sequence of communication cable core wires should meet the standards, the core wires are intact and there should be no broken wires, mixed wires, ground gas and poor insulation.

3.3.3

The main electrical characteristics and insulation index inspection of copper core all-plastic cables shall comply with the provisions of Appendix A of this specification.

3.3.4

The filling of filled cables should be even and full.

3.3.5

Inflatable cables should be filled with dry gas. After the air pressure reaches 30kPa ~ 50kPa and stabilizes for 3 hours (6h for armored cables), the air pressure value of the cable should not drop. Cables whose sealing performance does not meet the above requirements shall not be used.

3.3.6

The hanging wire of the self-supporting optical (electrical) cable should be parallel to the optical (electrical) cable. The steel strands should be tightly twisted, and the steel strands should not be loose after stripping off the 200mm plastic sheath at the end.

3.4 Pole Inspection

3.4.1

The inspection of circular reinforced concrete poles shall meet the following requirements.

- 1 Conical circular reinforced concrete pole, the taper should be 1.75.
- 2 The appearance quality of concrete poles shall meet the following requirements.
 - 1) There must be no circumferential and longitudinal cracks on the surface of prestressed concrete poles and partially prestressed concrete poles. Reinforced concrete poles shall not have longitudinal cracks, and the width of circumferential cracks shall not be greater than 0.05mm.
 - 2) There should be no slurry leakage at the edging and seam of the pole, and at the junction of the steel plate and the shaft.
 - 3) There should be no local bruises on the pole.
 - 4) The inner and outer surfaces of the pole must not leak steel bars, the inner surface must not have concrete slump, and the outer surface must not have honeycombs.
 - 5) There should be no pockmarks or sticky skin on the surface of the pole.