IEC 60794-1-2 Method E8 Flexing Test of Optical Cables / Testing Equipment

Description

12 Method E8: Flexing

12.1 Object

The purpose of this test is to determine the ability of an optical fibre cable to withstand repeated flexing in service, e.g. elevator cable.

12.2 Sample

The sample shall be terminated at each end in a connector, or in a manner such that the fibres, sheaths and any strain members are clamped together in a representative manner. It shall be of a length sufficient to carry out the specified test.

12.3 Apparatus

The test is carried out using the apparatus shown in Figure 13.

The pulleys shall have a semicircular shaped groove for circular cables and a flat groove for flat cables. The restraining clamps D shall be fixed so that the pull is always applied by the weight from which the carriage is moving away. An equivalent apparatus may be used, for example that shown in IEC 60227-2.

12.4 Procedure

Unless otherwise specified, the conditions for testing shall be in accordance with standard atmospheric conditions.

The sample shall be stretched over the pulleys, each end being loaded with a weight. The mass of these weights and the diameters of pulleys A and B shall be as specified in the detail specification.

The sample shall be flexed for the number of cycles specified in the detail specification. A cycle is defined as the movement of the carriage away from its starting position to one end of the traverse, followed by movement in the opposite direction to the other end and then back to the starting position.

12.5 Requirements

The acceptance criteria for the test shall be as stated in the detail specification. Typical failure modes include loss of optical continuity, degradation of optical transmittance or physical damage to the cable.

12.6 Details to be specified

The detail specification shall include the following:

a) diameters of pulleys A and B;

b) mass of weights;

c) number of cycles.

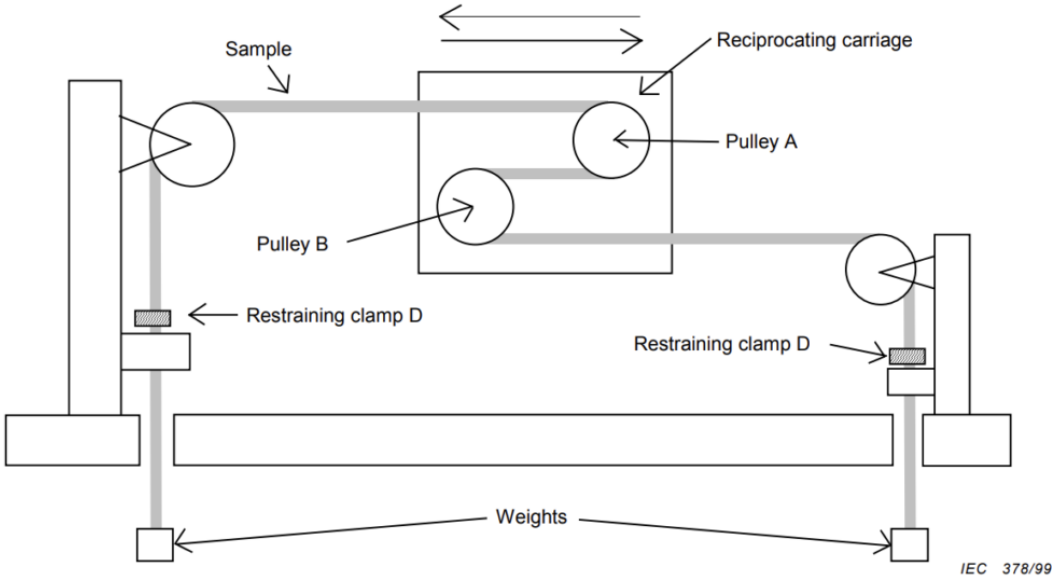
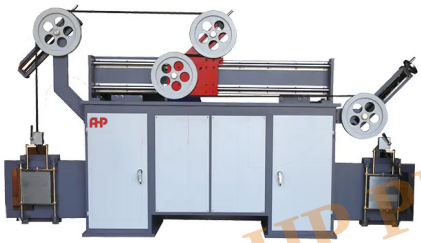


Figure 13 – Flexing apparatus



Flexing Tester for Optical Cables

- Automatic control of full cycle
- Flexing length 1000mm
- Flexing speed 100-350mm/min
- Hammer bracket weight 5kg-2pcs
- Weights 5kg-4pcs,2.5kg-1pcs, 1.0kg-1pcs
- Diameter of wheels 200mm, 250mm, 300mm
- Digital indicator number of cycles
- Adjustment of length of flexing travel
- Chrome coated guide shafts

Category

1. Equipment for Standards
2. Standards