RTS in optical fiber

Summary of Content

RTS (Rated Tensile Strength) is the maximum load an optical fiber cable can withstand before breaking, critical for ensuring structural integrity and safe operation.

Definition and Importance

RTS, also known as Ultimate Tensile Strength (UTS), represents the maximum tension a fiber optic cable can endure before failure occurs under standardized testing conditions . It is a key parameter for assessing the structural integrity of cables, particularly for overhead installations like ADSS (All-Dielectric Self-Supporting) cables, which span long distances between support points . A proper RTS ensures that the cable can safely support its own weight and additional environmental loads such as wind, ice, or temperature variations.

Relationship with MAT

RTS is closely related to MAT (Maximum Allowable Tension), which is the maximum tension that can be applied to a cable under designed meteorological conditions without causing damage or excessive strain to the fibers . Typically, MAT is set at about 40% of RTS, providing a safety margin to prevent cable failure during extreme conditions. This ratio ensures that the cable remains within safe operational limits, avoiding excessive sag or fiber attenuation.

Practical Applications

• Cable Design and Selection: RTS informs engineers about the strength requirements for cable materials, tower hardware, and anti-vibration measures .

Article Content

Technical Parameters of ADSS Fiber Optic Cables

Also known as special use tension, it refers to the maximum tension of the optical cable that may exceed the design

Optical Fiber Transmission

Because an optical fiber can only carry an optical signal, the electric signal from an information source has to be translated into an

Why are MAT and RTS important for ADSS?

The importance of Rated Tensile Strength (RTS) and Maximum Allowed Tension (MAT) in All-Dielectric Self

Why are MAT and RTS important for ADSS? Josefina Zhao Fiber

Rated Tensile Strength (RTS) Definition: RTS, also known as ultimate tensile strength, is the maximum load that a cable can

Benefits of Supporting RTS Across Optical Links

RTS propagated across optical link with OLT will provide for 1st time reliable and predictable optical/AUI link up process Maintaining

RTS Series

These new fiber optic enclosures allow for easier terminations, greater capacity and uncomplicated cable management. Fabricated

Optical Transmission System

These systems address performance issues related to long fiber links and often incorporate optical performance monitoring to

The Main Parameters of ADSS Fiber Cable

Rated tensile strength (UTS/RTS). Also known as ultimate tensile strength or breaking force, it refers to the calculated

Main Technical Parameters of ADSS Fiber Cable

It means that the optical cable allows short-term overload, and the optical fiber can withstand strain within a limited

Contact Us

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