

Dynamic fatigue parameters of optical cables

Introduction flaws grow. The mechanical behavior of optical fiber is described by parameters such as the strength distribution and fatigue. Fatigue is the measure of how fast a flaw grows when exposed to ...

Abstract The long-term mechanical reliability of optical fibers is the important problem in the design of optical fiber cables. #169; 1983 Optical Society of America

Dynamic fatigue parameter (n d) test of optical fibre using axial tension and two-point bending method was compared. The nd test result of the two methods was close when using proper rates.

Dynamic cables sections are subjected to significant and repetitive movements that jeopardize their integrity. Constantly exposed to mechanical fatigue, they may deteriorate more quickly.

The FBG concept as sensor relies on the mechanical deformation of the optical fiber to measure static or dynamic parameters like deformation, temperature or acceleration, therefore it is crucial to know the ...

Conventional fracture mechanics and fatigue theories were used to build a framework for estimating a safe stress value for the long-term mechanical reliability of optical fibers.

This paper presents dynamic fatigue results using a two-point bend apparatus that can be programmed to operate in constant velocity, constant strain rate, and constant stress rate loading ...

This paper presents an investigation of the fatigue life prediction for a dynamic optical cable under a turret-moored FPSO. The commonly used linear model for cable bending behaviors may lead to ...

This method measures the strength and the stress corrosion parameters of optical fiber at specified constant strain rates. It is a destructive test, and is not a substitute for proof testing.

Dynamic fatigue or stress corrosion, which influences rate of crack growth and delayed failure of silica optical fiber, is known to happen in presence of external stress, flaw/micro-crack and moisture on the ...

Dynamic fatigue tests were done under atmospheric and inert environments. Results were used to obtain portions of the universal fatigue curve in order to assess the potential accuracy of long-term ...



Dynamic fatigue parameters of optical cables

Web: <https://maxtools.co.za>

