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**Durability of Mechanism and Blade – Fiber Cleaver**

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Durability of Mechanism and Blade – Fiber Cleaver**1 Objectives**

The objectives of the tests are checking the durability of the cleaving blade and mechanical durability of the cleaver.

**2 Scope**

This report covers the performance of the durability of optical fiber cleaver, 1871696-1.

**3 Sample**

1871696-1, Fiber Cleaver

**4 Performance Objectives of Durability****4.1 Blade Durability**

The blade can cleave optical fiber 10000 times.

**4.2 Mechanical Durability**

The mechanism of the cleaver can endure 50000 times cleaving actions.

**5 Blade Durability****5.1 Test Method**

Repeat cleaving 10000 times and check the cleaved fiber at 1000, 3000, 5000, and 10000 times.

**5.2 Test Result**

Fig 1, 2, 3, and 4 show cleaved fiber at 1000, 3000, 5000, and 10000 cleaves respectively. No defects such as lip and roll off were observed on the cleaved fibers.

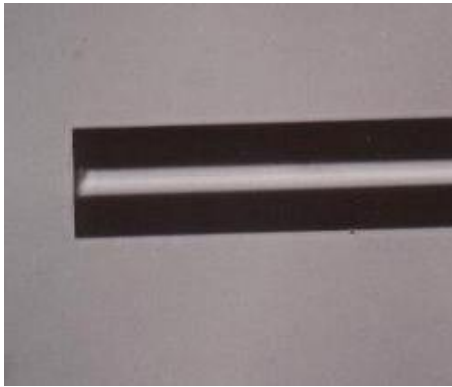


Fig.1 Cleaved fiber at 1000 times

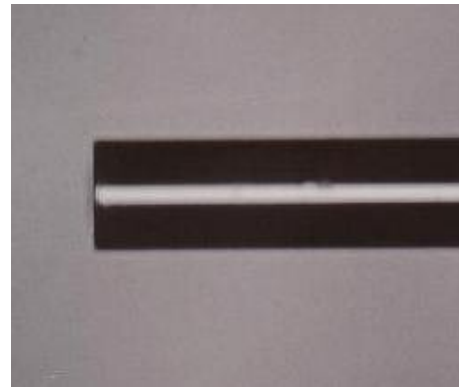


Fig.2 Cleaved fiber at 3000 times

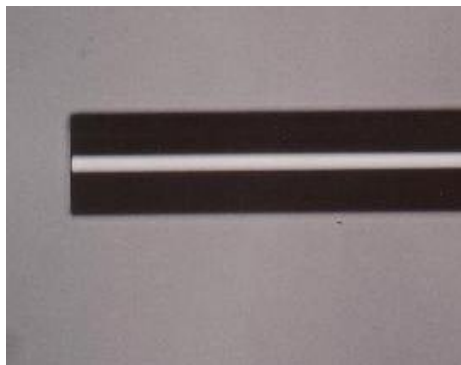


Fig.3 Cleaved fiber at 5000 times

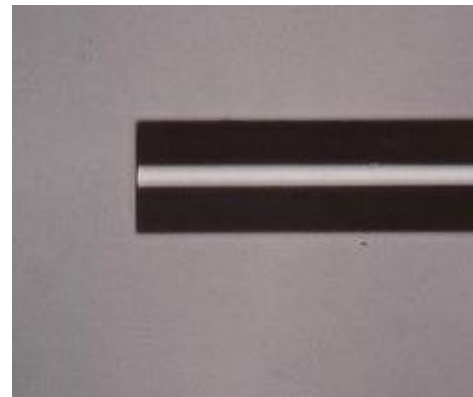


Fig.4 Cleaved fiber at 10000 times

## 6 Mechanical Durability

### 6.1 Test Method

Repeat cleaving action (without fiber) and observed the mechanical conditions

### 6.2 Test Result

#### 6.2.1 10000 times

Slightly higher friction than the original state is observed, but the action was normal. Fig 5, 6, and 7 show the appearance of each part.



Fig.5 Fiber holding lever,  
10000 times



Fig.6 Blade slide and fiber  
bending pillow, 10000 times



Fig.7 Blade slide guide,  
10000 times

6.2.2 30000 times

Although the blade slide guide looked slightly worn, the mechanical condition was same as above. Fig 8,



9, and 10 show the appearance of the each part.

6.2.3 50000 times

Although the action of fiber bending pillow was not as smooth as the original state, the cleaving performance was good. Fig 11, 12, and 13 show the appearance of the each part

Fig.8 Fiber holding lever, 30000 times



Fig.11 Fiber holding lever, 50000 times

Fig.9 Blade slide and fiber bending pillow, 30000 times



Fig.12 Blade slide and fiber bending pillow, 50000 times

Fig.10 Blade slide guide, 30000 times



Fig.13 Blade slide guide, 50000 times

7 Conclusion

Durability of the blade for 10000 cleaves and mechanism for 50000 slides was confirmed.