

Systematic TIME Construction and Contracting Est

Method of Statement

Fiber Optic Testing and Termination

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Fiber Optic cable Testing procedure Using Arc Fusion Splicer-FSM-60S

Fiber optic cable fusion splicing provides the lowest-db loss. Special equipment called Arc fusion splicer is used to perform the fiber fusion splicing.

High precision arc fusion splices are using to achieve lowest db loss. This equipment can be used for different type of fiber's SM, MM....etc.



Fiber optic cable splicing procedure

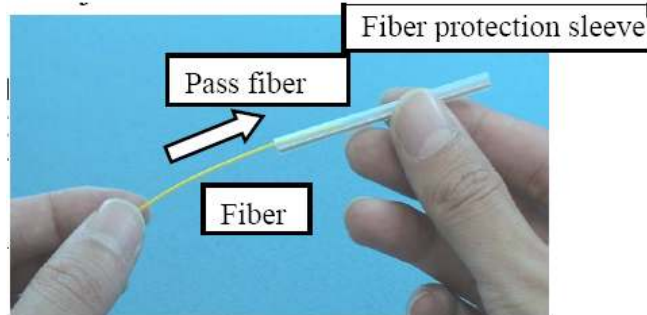
1. **Glanding:-**Proper clamp or gland will be used to secure the fiber cable.
2. **Preparation:-**Remove all the PVC insulation and armored sheathing. Put the fiber cable in to the fiber shelf.
3. **Surface Cleaning:-**Use a jelly or other cleaner to clean the fiber cable.
4. **Cleaning:-**Clean the fiber cores with pure [99%] alcohol.

Clean the fiber with high quality alcohol because dust partials from the fiber coating surface can be enter inside the protection sleeve and might result in a future fiber break.

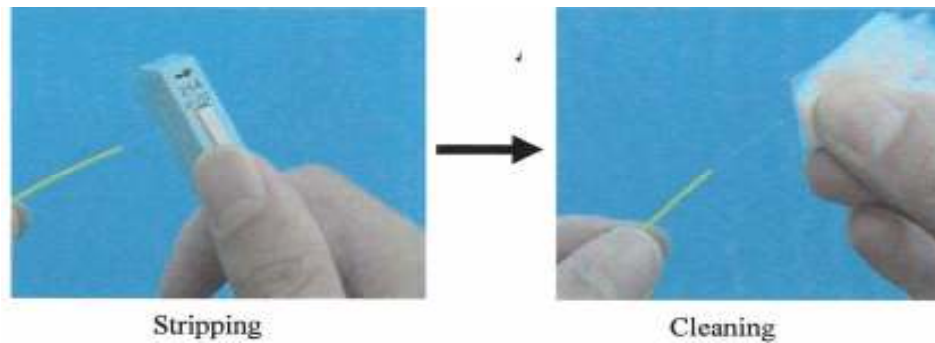


Cleaning

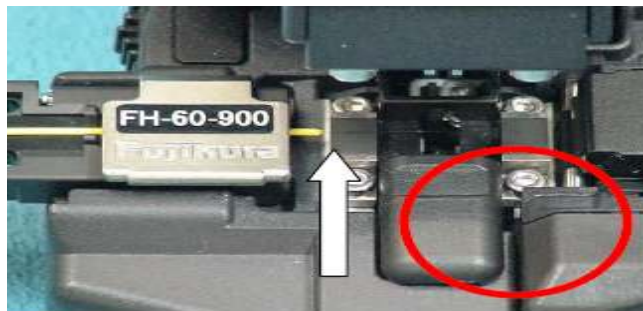
5. **Sleeves:**-Place the required length protection sleeve each core carefully.



6. **Fiber Stripping:**-Remove outer coating of fiber cores required length as per fiber type with a precision stripping tool. Clean the bared fiber core with pure [99%] alcohol.



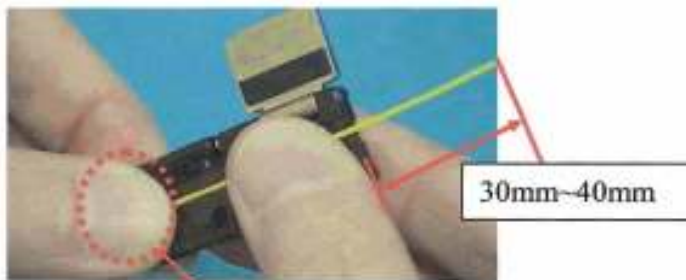
7. **Cleaving:**-Set the stripped fiber on the cleaver to cleave the fiber. Proper cleaving is a main important step for a good result.



8. **Start:-**Clean the equipment before starting the work. Use select mode for determine fiber cable type if fiber type is not identified to select Auto splice mode.

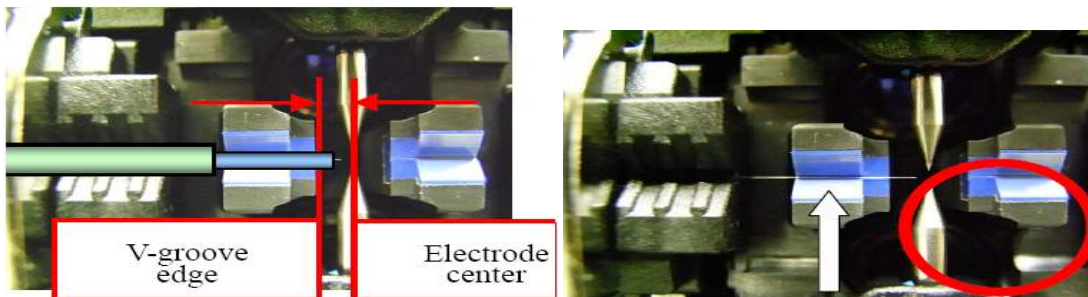


9. **Mounting:-**Set the cleaved fiber core onto the fiber holder with protruding required length as per the fiber type



Pressing down with a finger

10. **Alignment & Splicing:-**Loading the fiber to the arc Fusion splicer between the v-groove edge and tip of electrode. After completion of fiber automatic alignment arc discharge is performed to splice the fibers.

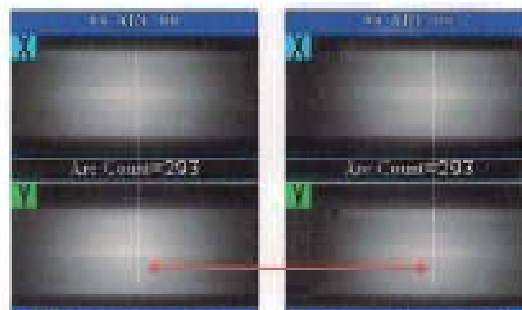




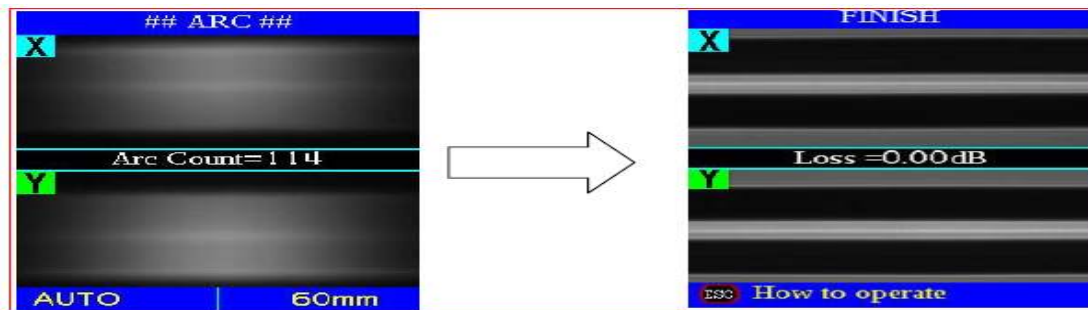
11. **Splice Loss:**-Estimated splice loss is displayed upon completion of splicing. Splice loss is affected by certain factors.



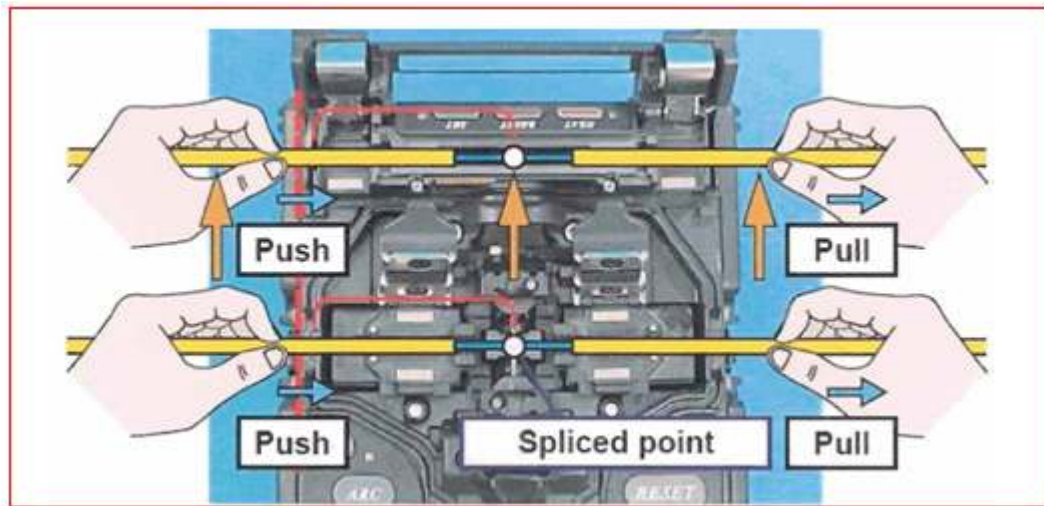
The arc discharge brightness changes during arc discharge.



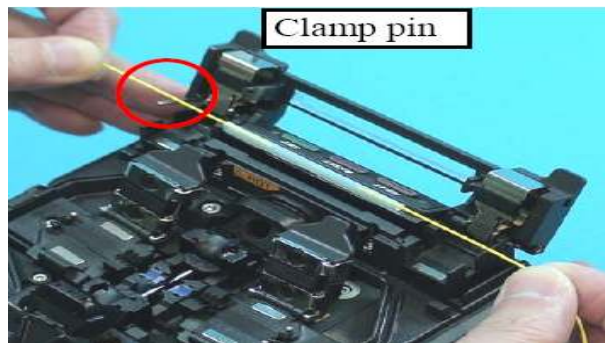
The center of arc discharge is shifted during arc discharge.



12. Make sure the splice point is located at the center of the protection sleeve.



13. Place fiber with protection sleeve in the center of the tube heater. The heating cycle starts automatically as soon as the tube heater is closed.



14. Take out the protected sleeve fiber core from the tube heater and put inside fiber splice tray. Arrange spliced fiber core properly in the shelf.

FIBER OPTIC CABLE TESTING PROCEDURE

**USING ANRITSU ACCESS MASTER OTDR – MT-9083A – 063(Optical Time Demine Reflect
Meter**

1. Disconnect one Core Fiber from both sides, which are going to be tested.
2. Connect one end of the Fiber to the near end adaptor of the testing equipment.
3. Press the start button to test the Fibers.
4. Testing will be carried out automatically by the testing equipment.
5. wave length will be used by the test equipment (850nm / 1300nm)
6. Test result, both graphical and test values, will be saved to the test equipment for later printing.
7. To save the correct test report, enter the cable description as required.
8. The result will be printed with the below given details.
 - db loss
 - Cable length
 - Reference db
 - Date
 - Project & Client name as entered before starting the test
9. Repeat the same procedure to all pairs.

General

The OTDR Function provides the capability of Measuring connection loss, fiber loss, and distance of an Optical Fiber .You can Locate Defects and Faults and determine the amount of signal loss at any point in an Optical Fiber. The analysis function automatically detects event positions such as splice point with loss exceeding the present threshold or returns loss and list the data in an event table