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ABSTRACT OF THE DISCLOSURE

It is an object of the invention to provide an apparatus and method for fusion splicing the optical fibers under the fusion splicing conditions suitable for respective optical fibers in which the types of optical fibers can be fully discriminated.

The present invention provides a fusion splicing apparatus for fusion splicing the end portions of the optical fibers by butt discharging, comprising an image observing mechanism (1) for observing the end portions of the optical fibers, an image processing section (2) for measuring the parameter data of a brightness distribution waveform of optical fiber in cross section from a picked up image, a fuzzy operation section (4) for obtaining a degree of attribution for the measured parameter data from the fuzzy operation data registered in advance in a data registering section (3) and identifying the type of optical fiber through a fuzzy operation, a collating section (6) for collating the identified type of optical fiber with the fusion splicing conditions for each type of optical fiber registered in advance in the fusion splicing condition registering section (5), a display unit (7) for displaying the collation result, a fusion splicing mechanism (9), and a control section (8).



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