

COUPLING METHOD AND COUPLING STRUCTURE FOR HOLLOW-CORE FIBER, AND FIBER CONNECTOR

Abstract

The present disclosure relates to the technical field of optical communication, and in particular, to a coupling method and a coupling structure of a hollow-core fiber, and a fiber connector. In the present disclosure, a first optical fiber is fusion-spliced to a first end face of a bridging fiber, a second end face of the bridging fiber is processed into an inclined surface with a preset angle which serves as a coupling end face, and an integrated structure, obtained by fusion-splicing the first optical fiber and the bridging fiber, is fixed in a first sleeve to obtain a first intermediate body; a hollow-core fiber is fixed in a second sleeve to obtain a second intermediate body; and the first intermediate body and the second intermediate body are clamped and fixed using an optical fiber coupling platform, a position of the first intermediate body and/or a position of the second intermediate body are/is adjusted, optical power detection is performed synchronously, and a coupling point is encapsulated and fixed when coupling loss is minimal, so as to achieve coupling between the hollow-core fiber and the first optical fiber. The present disclosure expands application scenarios and reduces coupling loss and improves return loss.

(Fig. 2)