

DEVICE AND METHOD FOR LOADING AND UNLOADING QUARTZ REACTION TUBE TO AND FROM SEMICONDUCTOR DIFFUSION EQUIPMENT

ABSTRACT

A loading and unloading device and method for a quartz reaction tube of a semiconductor diffusion equipment are provided; the loading and unloading device is used in combination with a lifting device of the quartz reaction tube; the lifting device has an interface flange that can be connected to the reaction tube. The loading and unloading device includes a translation drive structure, a linear guide rail, a bracket, and an auxiliary support structure to detachably fix the quartz reaction tube. During the loading procedure, the auxiliary support structure is mounted on the bracket; the front end of the translation drive structure is docked with the doorframes of the semiconductor diffusion equipment through a fixing structure, and the quartz reaction tube is docked with the interface flange of the lifting device by horizontally moving the bracket along the linear guide rail.

[Figure 1]