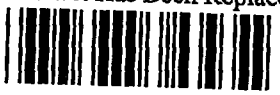
ABSTRACT

A dual stage load lock is provided for transfer of semiconductor wafers between an environment at atmospheric pressure and a high vacuum environment, such as a wafer processing system. The dual stage load lock includes a first load lock chamber and a second load lock chamber separated by a dividing ledge which extends a distance inwardly from the inner wall of the load lock assembly. The lower load lock chamber selectively communicates with a transfer chamber of the processing system, and is maintained at high vacuum. The upper load lock chamber selectively communicates with the external environment at atmospheric pressure. Therefore, the environment of the upper load lock chamber may vary between atmospheric pressure, when wafers are transferred between the load lock and the outside environment, and high vacuum, when the wafers are transferred between the first and second chambers of the load lock. The load lock may include modular chamber segments that can be arranged in a variety of configurations. A method for transferring wafers through the load lock is also provided.

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