This Sheet Has Been Replaced



WAFER PROCESSING MACHINE VACUUM FRONT END METHOD AND APPARATUS

Abstract of the Disclosure:

A carrousel type wafer processing machine in which wafers are held in vertical orientations in holders on a rotatable plate and sequenced through a plurality of processing stations for processing, such as by the application of a sputtered film thereto, is provided with a vacuum front end module that transfers wafers between cassette modules in which the wafers are horizontally disposed and a loading and unloading station of the processing machine, through a transfer chamber. The transfer chamber includes a wafer transfer arm, an aligning station, a preheating and degassing station, a cooling station preferably combined with the preheating station, and an uprighting station from which wafers are exchanged with the processing machine. The arm moves unprocessed wafers individually from a cassette module to the aligner, then to the preheating station, then to the uprighting station. The arm also moves processed wafers from the uprighting station, to the cooling station and to a cassette module. Preferably, one cassette module is being vented, reloaded or replaced, and pumped to a vacuum while the wafers of the other are being cycled through the processing machine.