ABSTRACT

TEST HANDLER

The present invention is a test handler for picking up semiconductor devices from a conveying system and placing them at testing positions and returning the tested devices to the conveying system efficiently and modularly. The basic apparatus has two concentric shafts each connected at one end to a cam following assembly and at the other end to a pick and place arm. The assembly has a block with a centre bore for accommodating a ball screw and a longitudinal channel for receiving a lever cum cam follower subassembly connected to one end of the concentric shafts. The cam follower assembly and the concentric shafts translate the rotational movement of the ball screw into radial movement of the pick and place arms between the conveying system and the test rig. Another pick and insertion assembly associated detachably with the pick and place arms alternately picks up semiconductor devices from the conveying system and places them in position for testing. At the same time, tested devices are returned by the pick and insertion assembly to conveying system in the same cycle. Each of the pick and place arm features a quick change plate for accommodating a variety of semiconductor device sizes. As such, the present invention handles the testing of semiconductors efficiently and modularly.

Figure 1.