THAT WHICH IS CLAIMED:

1. A pallet tester comprising:

a pallet positioning station configured to position a pallet on a conveyor, and comprising a pallet push arm movable between a retracted position and a pallet positioning position;

a pallet impact station adjacent the conveyor and aligned with said pallet positioning station, and comprising a carriage assembly configured to impact the pallet, and a latching mechanism coupled to said carriage assembly; and

a controller configured to

move said pallet push arm to the retracted position to receive the pallet for positioning,

move said pallet push arm to the pallet positioning position to move the pallet towards the pallet impact station until an impact side of the pallet is aligned with an impact reference plane, and

operate said latching mechanism to raise said carriage assembly, and to release said carriage assembly when a height of the carriage assembly corresponds to a desired release height so that a predetermined impact force strikes the pallet at the impact reference plane.

2. The pallet tester according to Claim 1 wherein said pallet positioning station further comprises a first movement sensor configured to generate a first movement signal corresponding to movement of said pallet push arm when in the pallet positioning position; and wherein said controller is further configured to move the pallet towards the pallet impact station until the first movement signal reaches a predetermined value, with the predetermined value corresponding to when the impact side of the pallet is aligned with the impact reference plane.

3. The pallet tester according to Claim 1 wherein said pallet impact station further comprises a second movement sensor configured to generate a second movement signal corresponding to how high said carriage assembly is raised

by said latching mechanism; and wherein said controller is further configured to release said carriage assembly when the height of the carriage assembly as determined by the second movement signal corresponds to the desired release height.

4. The pallet tester according to Claim 1 wherein the pallet carries an RFID tag having the predetermined impact force stored thereon that is to strike the pallet; and further comprising an RFID reader configured to read the RFID tag and forward the predetermined impact force to said controller; and wherein said controller is further configured to determine the desired release height based on the predetermined impact force.

5. The pallet tester according to Claim 1 wherein the pallet carries an RFID tag having dimensions of the pallet stored thereon; and further comprising an RFID reader configured to read the RFID tag and forward the dimensions of the pallet to said controller; and wherein said controller is further configured to determine the predetermined value corresponding to when the impact side of the pallet is aligned with an impact reference plane based on the dimensions of the pallet.

6. The pallet tester according to Claim 1 wherein said pallet positioning station further comprises a pallet lift assembly configured to lift the pallet off of the conveyor prior to aligning the impact side of the pallet with the impact reference plane.

7. The pallet tester according to Claim 1 wherein said pallet positioning station further comprises a pallet lift assembly configured to lift the pallet off of the conveyor prior to said carriage assembly striking the pallet.

8. The pallet tester according to Claim 1 wherein the conveyor comprises a plurality of spaced apart elongated rollers that are parallel to one another; and wherein said pallet positioning station further comprises a pallet lift assembly configured to lift the pallet prior to positioning and impact, with said pallet lift assembly comprising a plurality of spaced apart elongated lift elements, with each respective lift element sized to fit between two adjacent rollers.

9. The pallet tester according to Claim 8 wherein said pallet lift assembly is configured to lift the pallet off of the conveyor in a vertical direction, and to position the pallet in a horizontal direction prior to said pallet push arm being placed in the pallet positioning position.

10. The pallet tester according to Claim 1 wherein said carriage assembly comprises:

a carriage;

a plurality of counter weights carried by said carriage;

an impact plate carried by said carriage; and

a pair of impact tines carried by said impact plate.

11. The pallet tester according to Claim 10 wherein said impact plate is adjustable in a vertical direction so as to set where said pair of impact tines strike the pallet.

12. The pallet tester according to Claim 1 wherein said pallet impact station further comprises a braking mechanism; and wherein said controller is further configured to activate said braking mechanism after said carriage assembly strikes the pallet so as to prevent said carriage assembly from bouncing back and striking the pallet again.

13. The pallet tester according to Claim 1 wherein the pallet carries a unit load during impact with said pallet impact station, wherein said pallet impact station comprises a stationary unit load push bar positioned above the roller conveyor and adjacent the impact reference plane; and as said controller moves said pallet push arm in the pallet positioning position to move the pallet, the unit load contacts the stationary unit load push bar as the impact side of the pallet continues to move towards the impact reference plane.

14. A pallet tester comprising:

a pallet positioning station for positioning a pallet on a conveyor, and comprising:

a pallet lift assembly configured to lift the pallet off of the conveyor,

a pallet push arm movable between a retracted position and a pallet positioning position, and

a sensor configured to generate a first movement signal corresponding to movement of said pallet push arm when in the pallet positioning position;

a pallet impact station adjacent the conveyor and aligned with said pallet positioning station, and comprising:

a carriage assembly configured to impact the pallet,

a latching mechanism coupled to said carriage assembly,

a sensor configured to generate a second movement signal corresponding to how high said carriage assembly is raised by said latching mechanism; and

a controller configured to

move said pallet push arm to the retracted position to receive the pallet for positioning,

operate said pallet lift assembly to lift the pallet off of the conveyor,

move said pallet push arm to the pallet positioning position to move the pallet towards the pallet impact station until the first movement signal reaches a predetermined value, with the predetermined value corresponding to when an impact side of the pallet is aligned with an impact reference plane, and

operate said latching mechanism to raise said carriage assembly, and to release said carriage assembly when a height of the carriage assembly as determined by the second movement signal corresponds to a desired release height so that a predetermined impact force strikes the pallet at the impact reference plane.

15. The pallet tester according to Claim 14 wherein the pallet carries an RFID tag having the predetermined impact force stored thereon that is to strike the pallet; and further comprising an RFID reader configured to read the RFID tag and forward the predetermined impact force to said controller; and wherein said

controller is further configured to determine the desired release height based on the predetermined impact force.

16. The pallet tester according to Claim 14 wherein the pallet carries an RFID tag having dimensions of the pallet stored thereon; and further comprising an RFID reader configured to read the RFID tag and forward the dimensions of the pallet to said controller; and wherein said controller is further configured to determine the predetermined value corresponding to when the impact side of the pallet is aligned with an impact reference plane based on the dimensions of the pallet.

17. The pallet tester according to Claim 14 wherein said pallet positioning station further comprises a pallet lift assembly configured to lift the pallet off of the conveyor prior to aligning the impact side of the pallet with the impact reference plane.

18. The pallet tester according to Claim 14 wherein said pallet positioning station further comprises a pallet lift assembly configured to lift the pallet off of the conveyor prior to said carriage assembly striking the pallet.

19. The pallet tester according to Claim 14 wherein said pallet impact station further comprises a braking mechanism; and wherein said controller is further configured to activate said braking mechanism after said carriage assembly strikes the pallet so as to prevent said carriage assembly from bouncing back and striking the pallet again.

20. A method for testing a pallet using a pallet tester comprising a pallet positioning station configured to position a pallet on a conveyor, and comprising a pallet push arm movable between a retracted position and a pallet positioning position; and a pallet impact station adjacent the conveyor and aligned with the pallet positioning station, and comprising a carriage assembly configured to impact the pallet, and a latching mechanism coupled to the carriage assembly, the method comprising:

moving the pallet push arm to the retracted position to receive the pallet for positioning;

moving the pallet push arm to the pallet positioning position to move the pallet towards the pallet impact station until an impact side of the pallet is aligned with an impact reference plane; and

operating the latching mechanism to raise the carriage assembly, and to release the carriage assembly when a height of the carriage assembly corresponds to a desired release height so that a predetermined impact force strikes the pallet at the impact reference plane.