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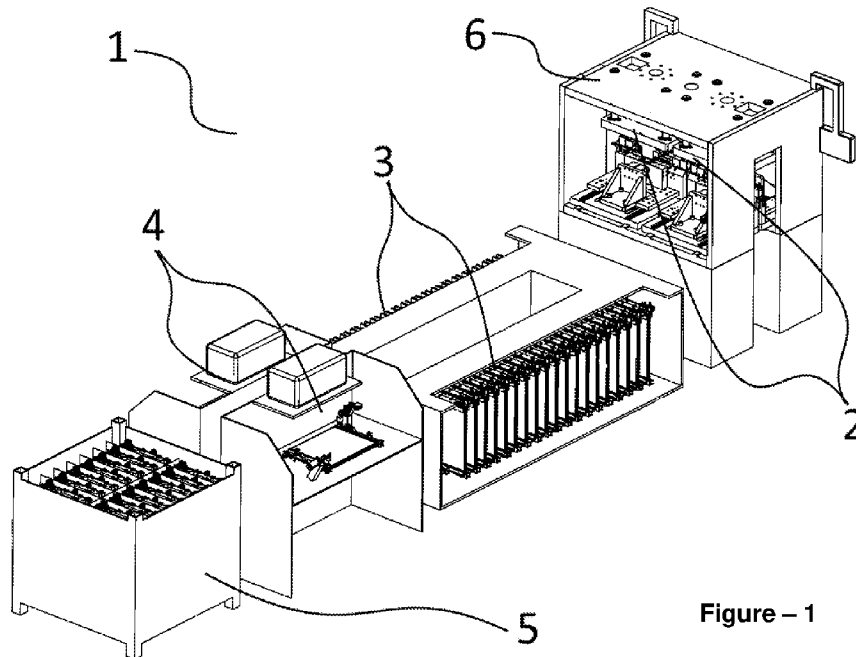


Figure - 1

(57) Abstract: The invention is a dual radiator interlocking machine (1) converting radiator cores into complete radiator automatically and making it ready for shipment stage and it comprises radiator interlocking unit (6) wherein radiator cores are placed to be converted complete radiator, at least two interlocking mechanisms (2) located onto radiator interlocking unit (6) and locking radiator cores, conveyor (3) that keep waiting complete radiators formed on interlocking mechanisms (2) and/or carrying, test unit (4) conducting quality control of complete radiators coming from conveyors (3), shipment unit (5) where complete radiators controlled at test unit (4) are transferred for shipment.



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DUAL RADIATOR INTERLOCKING MACHINE

Technical Field

Invention relates to dual radiator interlocking machine used in manufacture of radiators.

- 5 The invention particularly relates to a dual radiator interlocking machine converting radiator core into complete radiator automatically and making it ready for shipment stage.

Present State of the Art

- 10 In radiator embodiment the part in outer surface is called fin. Tubes are placed in order on fin and table is installed. The formed embodiment is soldered with brass at 600 °C and radiator body is formed. This radiator body is called radiator core.

- Radiator core is mounted by interlocking plastic upper boiler, upper boiler gasket, plastic lower boiler and lower boiler gasket. The product produced in this way is called complete radiator. Complete radiators are put in order in complete radiator cases and
15 made ready for shipment by being test.

- In current application, conventional interlocking machines are used. Conventional interlocking machines comprise an interlocking mechanism on a body. Radiators prepared by interlocking are put into order in carrying conveyor and carried to test mechanism provided in a separate place. After completion of test, they are put in order
20 in carrying trolley again and shipped to shipment area. Radiators delivered to shipment area by carrying trolleys are placed in shipment boards and made ready for shipment. Too many carrying processes and handling of product permanently by employees causes bending, damage and/or becoming dirty of fins. For that reason, the products are separated as default and sent for recycling. When the cycle increases, the waste
25 costs increases too.

- As a result of search made regarding the matter, a utility model application numbered 2008/04669 and entitled "SKIRT TYPE PANEL RADIATOR MANUFACTURE MACHINE" is encountered. The invention discloses a skirt type panel radiator manufacture machine providing easy and quick production of panel radiators used in
30 places such as home, workplace etc. needing heating. However, it does not disclose a dual radiator interlocking machine converting radiator core into complete radiator automatically and making it ready for shipment stage.

As a result, due to above described disadvantages and inadequacy of existing solutions, it has been necessary to make development in the related art.

Purpose of the Invention

The invention has been developed with inspiration from existing situations and aims to
5 eliminate the above mentioned disadvantages.

Primary purpose of the invention is to produce radiators in a shorter time period and automatically. Production and test stages of radiators are combined, In addition, number of radiator interlocking group is increased and combined in a machine. Thus, production speed is doubled and the time needed for shipment is eliminated.

10 Another purpose of the invention is to make radiators ready for shipment without damaging thereon. For that reason, radiator test unit and radiator interlocking machine are combined and unnecessary carrying is prevented. When the carrying decreases, damage rate decreases. Similarly, while cost decreases, profitability increases.

In order to achieve above mentioned purposes, the invention relates to a dual radiator
15 interlocking machine converting radiator cores into complete radiator automatically characterized by comprising

- radiator interlocking unit wherein radiator cores are placed to be converted complete radiator,
- interlocking mechanism located onto radiator interlocking unit and locking
20 radiator cores,
- conveyor that keep waiting complete radiators formed on interlocking mechanisms and/or carrying thereof
- test unit conducting quality control of complete radiators coming from conveyors,
- 25 - shipment unit where complete radiators controlled at test unit are transferred for shipment.

The structural and characteristics features of the invention and all advantages will be understood better in detailed descriptions with the figures given below and with reference to the figures, and therefore, the assessment should be made taking into
30 account the said figures and detailed explanations.

Brief Description of the Drawings

Figure 1 is a perspective view of dual radiator interlocking machine disclosed under the invention.

Description of Part References

1. Dual radiator interlocking machine
- 5 2. Interlocking mechanism
3. Conveyor
4. Test unit
5. Shipment unit
6. Radiator interlocking unit

10 Detailed Description of the Invention

In this detailed description, the preferred embodiments of the dual radiator interlocking machine (1) disclosed under the invention have been described only for purpose of better understanding of the matter.

15 Figure 1 shows a perspective view of dual radiator interlocking machine (1) disclosed under the invention. Dual radiator interlocking machine (1) converting radiator cores into complete radiator automatically and making it ready for shipment stage comprises

- radiator interlocking unit (6) wherein radiator cores are placed to be converted complete radiator,
- at least two interlocking mechanisms (2) located to radiator interlocking unit (6) and locking radiator cores,
- 20 - conveyor (3) that keep waiting complete radiators formed on interlocking mechanisms (2) wait and/or carrying thereof,
- test unit (4) conducting quality control of complete radiators coming from conveyors (3),
- 25 - shipment unit (5) where complete radiators controlled at test unit (4) are transferred for shipment.

Interlocking mechanisms (2), conveyors (3) test units (4) are located at least two, preferably one on the right and one on left.

30 Radiator cores are interlocked by right interlocking mechanism (2) and left interlocking mechanism (2) located on radiator interlocking unit (6) of dual radiator interlocking

machine (1). Right and left interlocking mechanisms (2) may interlock different cores independent of each other. Even, preferably, they can also be run as single part. In such case, different interlocking mechanisms (2) are installed onto dual radiator interlocking machine (1) and two different radiators can be obtained. Complete
5 radiators consisting of interlocked radiator cores are transmitted to right conveyor (3) and left conveyor (3).

Depending on the test speed, complete radiators in the conveyor (3) are either directly transferred to test unit (4) or waited in conveyor (3) for test order. At test unit (4), radiators are tested by use of pneumatic system air for quality control. Radiators
10 passing quality control at test unit (4) are transferred to shipment unit (5). Radiators produced at dual radiator interlocking machine (1) are not needed to be carried or touched by employees. Thus, product quality is kept or fault product does not occur. While workforce need reduces, double production is achieved. Thus, costs reduce,

CLAIMS

1. A dual radiator interlocking machine (1) converting radiator cores into complete radiator automatically and making radiator cores ready for shipment stage characterized in comprising;
 - 5 - radiator interlocking unit (6) wherein radiator cores are placed to be converted complete radiator
 - at least two interlocking mechanisms (2) located onto radiator interlocking unit (6) and locking radiator cores,
 - conveyor (3) that keep waiting complete radiators formed on interlocking mechanisms (2) wait and/or carrying thereof,
 - 10 - test unit (4) conducting quality control of complete radiators coming from conveyors (3),
 - shipment unit (5) where complete radiators controlled at test unit (4) are transferred for shipment.
- 15 2. A dual radiator interlocking machine (1) according to claim 1, characterized in that at least two interlocking mechanisms (2) that interlocking the radiator cores are located on the right and on the left of interlocking mechanisms (2).
3. A dual radiator interlocking machine (1) according to claim 1, characterized in that at least two conveyors (3) that keep waiting complete radiators formed on
20 interlocking mechanisms (2) and/or carrying thereof are located as the right conveyor (3) and the left conveyor (3).
4. A dual radiator interlocking machine (1) according to claim 1, characterized in that at least two test units (4) that conducting quality control of complete radiators coming from conveyors (3) are located as the right test unit (4) and the left test unit
25 (4).

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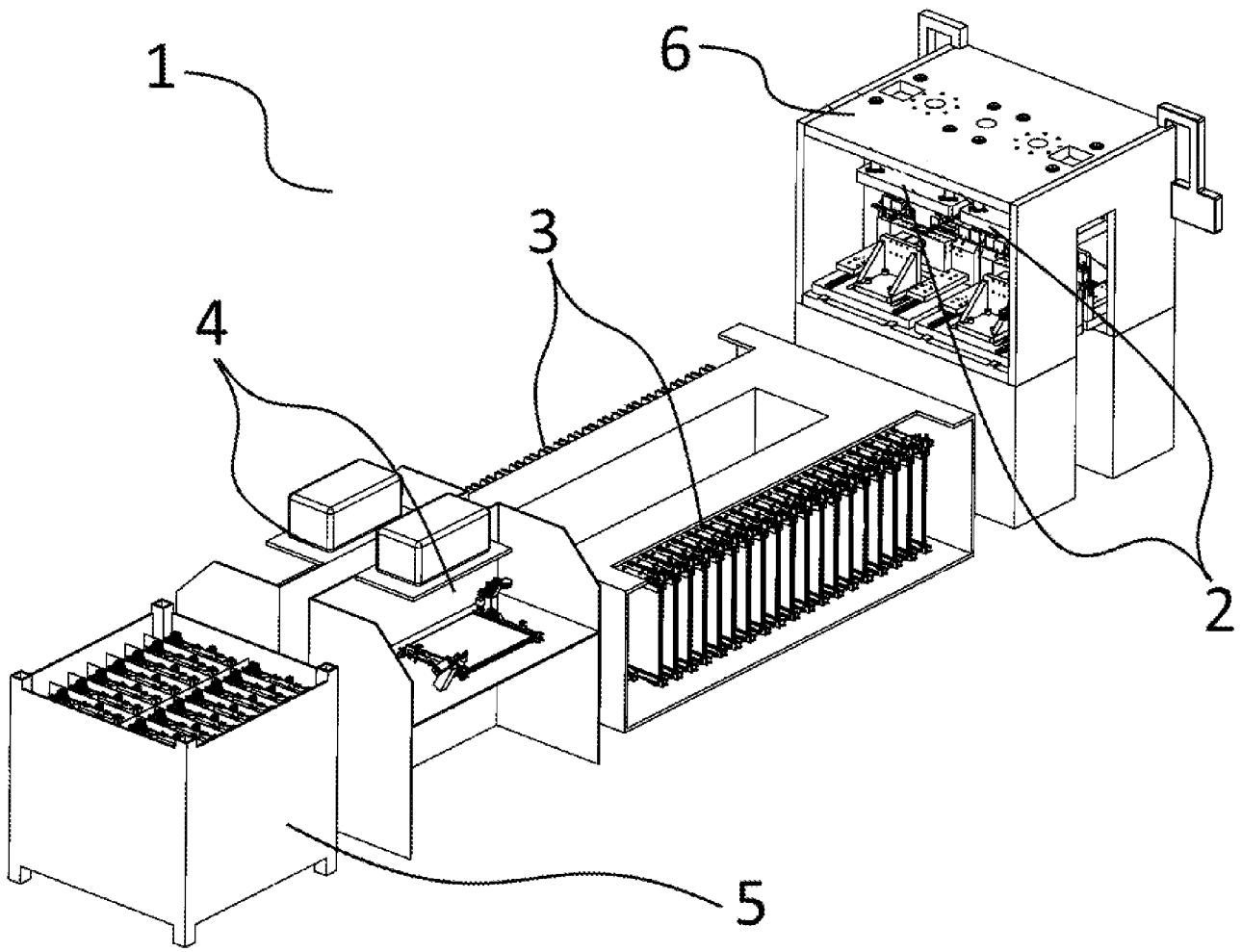


Figure – 1