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(54) **Title:** ROBOT ASSISTED AUTO LASER WELDING MACHINE

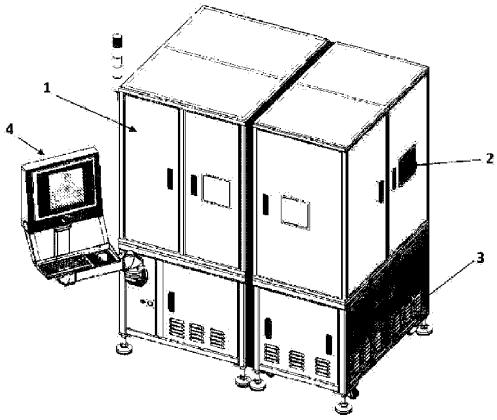

FIGURE 4

(57) **Abstract:** : The present invention covers an automatic laser welding machine for tube parts. It consists a multi-axis robotic arm auto loader unloader, a fibre laser system, an XYZ granite table based precision motion stage, a laser welding head, a machine vision alignment and quality control system, a machine vision processing monitoring system, a machine control PC, work parts holding trays, tube parts holder and fixture, machine safety enclosure, etc. Additional safety features such as emergency stop buttons and door interlock circuit are installed to ensure the machine and operator's safety.

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