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(57) Abstract :
The invention discloses a dual-mode robotic apparatus (100) integrating a welding torch (101) and polishing head (102) on a rotatable turret (106) driven by servo actuator (107), supported by real-time sensor feedback system (108). Mounted on a robotic arm (103) with an adaptive control module (109), the apparatus performs sequential welding and polishing on sheet metal, improving precision, reducing production time, and enhancing surface finish consistency in industrial applications.

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