

ABSTRACT

The present disclosure provides an electro-hydraulic combination driven explosion-proof legged robot, relating to the technical field of robots. The electro-hydraulic combination driven explosion-proof legged robot includes a positive-pressure chamber body and a leg-foot assembly. The leg-foot assembly includes a hydraulic cylinder. A servo pump is arranged inside the chamber body. The hydraulic cylinder is located outside the chamber body. The chamber body has a chamber wall formed with oil inlet and outlet holes configured to intercommunicate the servo pump with the hydraulic cylinder. The leg-foot assembly includes a mounting bracket, a leg-foot forward-and-backward swing mechanism, a hip joint mechanism and a leg-foot mechanism. The leg-foot forward-and-backward swing mechanism and the hip joint mechanism are connected outside the chamber body through the mounting bracket. The hip joint mechanism is connected to the leg-foot mechanism and is able to drive the leg-foot mechanism to swing laterally inward and outward. The leg-foot forward-and-backward swing mechanism is connected to the hip joint mechanism in a coaxial transmission manner and is able to drive the hip joint mechanism to rotate. The present disclosure can reduce the difficulty of control algorithms while achieving an explosion-proof performance for the robot.

(FIG. 1)