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(57) Abstract :
The present invention discloses a smart device (100) for predictive maintenance of hydraulic systems (106). The device comprises sensors (101) for monitoring pressure, flow, temperature, and contamination, a central processing unit (102) for data processing, a wireless communication module (103), and a machine learning module (104) for predictive analytics. A user interface (105) provides real-time insights, health scores, and alerts. The invention enables early fault detection, reduces downtime, minimizes maintenance costs, and extends system life, ensuring improved efficiency and sustainability in hydraulic applications.

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