

PIPELINE ROBOT, PIPELINE VIDEO-SIGNAL ACQUISITION AND
TRANSMISSION DEVICE AND PIPELINE DETECTION SYSTEM AND METHOD
ABSTRACT OF THE DISCLOSURE

A pipeline robot, a pipeline video signal acquisition and transmission device, and a pipeline detection system and method. The pipeline robot comprises a camera module (1) and a crawler (3), wherein the camera module (1) comprises a front-view digital camera, a first microprocessor and a rotation motor; the crawler comprises a frame body (31), wheels (32) on the both sides of the frame body, a driving motor, a sensor group, a second microprocessor, a network transmission module and a first power carrier module; a cable reel comprises a power line, a second power carrier module, a fourth microprocessor and a network communication module; and an acquisition control terminal is a mobile terminal provided with a detection module. The synchronous and common-line transmission of power supplies, video signals and control signals can be achieved by merely using dual line cores, the number of cables can be decreased, the weight can be reduced, and ultra-long distance transmission can be achieved through the transmission mode; and remote operations can be implemented only by installing detection module software at the mobile terminal without using a traditional large control box.

FIG. 1