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Automatic-Controlled Circumferential MAG Welding System for Pipeline Construction

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Synopsis :

An automatic-controlled MAG welding system which incorporates expert programs simulating professional skills and know-how has been developed and applied to field welding. The principal results work were: (1) Joining efficiency was nearly double that with conventional SMAW, (2) the quality of welded joints was excellent with few variations, and (3) further labor savings associated with a higher arc time rate are desired. The new system also holds considerable promise for alleviating dirty, dangerous, and hard work condit

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Welding head

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and are incorporated into a data base for effective use as needed.

(2) Actual Execution in Accordance with Skills

(7) Outstanding Mobility in Welding Work

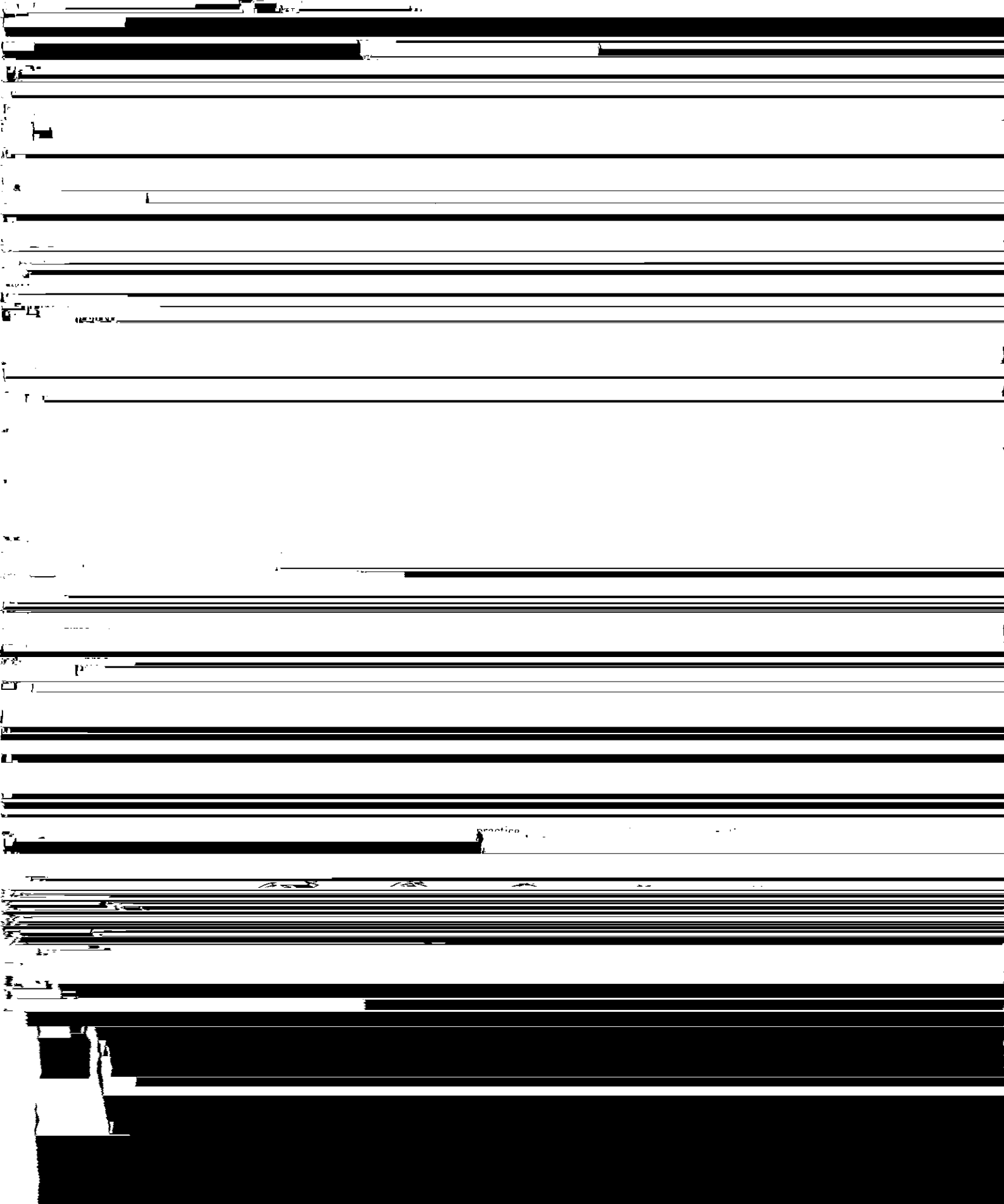
The system, including the engine-generator, control-

Using the learning function, the welding conditions

and quick, easy access to various welding sites. A

← MAG welding for all passes → ← MAG welding except TIG in root pass →

(Symmetrical) (Asymmetric) (Asymmetric) (Asymmetric) (Asymmetric)





On the other hand, joint quality at the JIS Grade 1 level was achieved in virtually all automatic welds. In comparison with manual welding variations are fewer