







was exhibited in the fusion zone, but was greatest in the upper and center portions of the fusion zone.

2) Evaporative loss of the alloying element Mg was related to the Mg content of the base metal. Greater alloying content resulted in greater evaporative loss.

3) Increasing the shielding gas flow rate was found to be effective in reducing the plasma and increasing laser absorption.

4) Slight increases in the entrance angle appeared to improve absorption of the laser beam and resulted in increased penetration.

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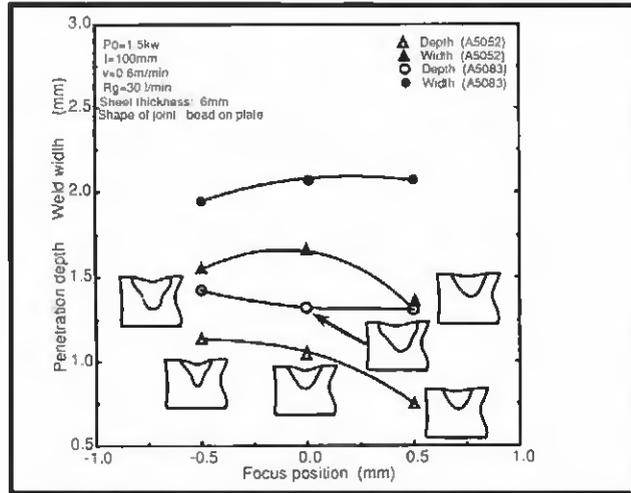


Fig. 5 — The influence of the focus position on penetration depth and weld width.

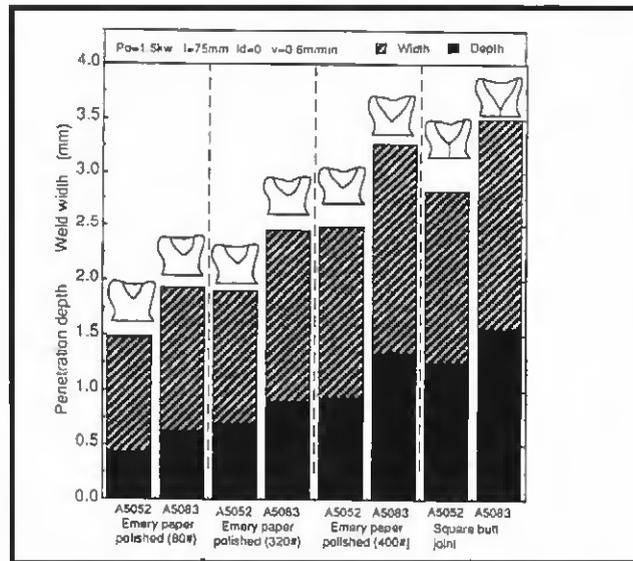


Fig. 6 — The influence of preparation of the workpiece surface and shape of the joint.

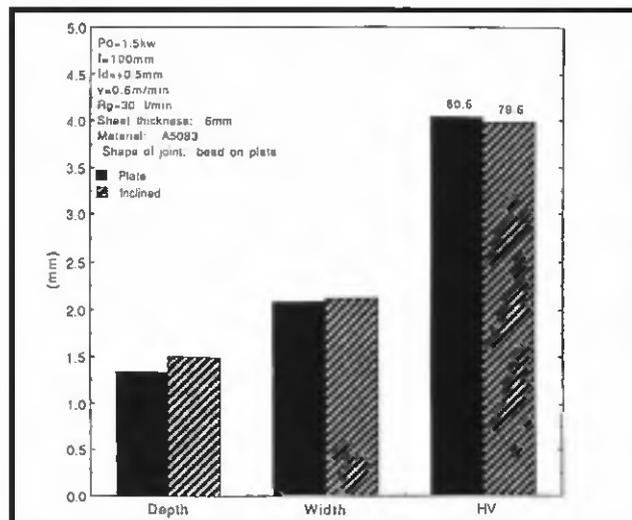


Fig. 7 — Comparison of the inclined workpiece with the plate work-piece.