DISCUSSION

G. S. Hartman[1] *(discussion question)*—It seems as though the oxygen level in the weld deposit is independent of the O_2 content of the core wire as the core wire varied oxygen content, varied from 20 to 450 ppm. It appeared from your slides that it reached an equilibrium with the slag. Is that your conclusion?

D. J. Abson (author's response)—Clearly, the deposit oxygen content is influenced strongly by the electrode coating, which has its effect primarily through the slag. I agree that it appears to approach an equilibrium level, but this level is clearly influenced by arc voltage, particularly for DC straight polarity welding.

G. S. Hartman (discussion question)—Since the O_2 and N_2 contents have increased, have you investigated what the increase in H_2 was?

D. J. Abson (author's response)—I did not investigate deposit hydrogen contents in the study, but I was aware of earlier work [*1*] in which only a small influence of current supply type on deposit hydrogen content was observed in shielded metal arc deposits.

Reference

[*1*] Hart, P. H. M., "Weld Hydrogen Levels—The Influence of Welding Parameters," *The Welding Institute Research Bulletin*, Vol. 20, No. 4, 1979, pp. 106-108.

[1]A. Finkl & Sons Co., Chicago, IL 60614.