REJOINDER

(Received 10 *June* 1974)

THE AUTHORS thank the correspondent for drawing their attention to certain points in the analysis. The authors would like to respond as follows:

1. Regarding the addition of the heat generation term $Q(T)$ to the governing energy equation [equation (1)] [1]. The authors feel that the effect of the term is negligible since a fluidized bed combustor usually contains no more than 2 per cent coal.

2. As for the variation of the property values with the distance from the wall, Yoshida *et al.* [2] have used the constant property equation without the radiation term. As the main aim of [1] is to investigate, the radiation contribution, the property variation was not taken into consideration.

3. The correspondent is indeed correct in stating that the temperature of the burning coal particles is 200 to 300°C higher than the average bed temperature. However, in $T_{eff} = (1 - x)T_b + xT_{coal}$, x will be of the order of 0·02. As a result T_{eff} will be virtually the same as T_b.

4. The assumption of a gamma function for the age distribution of the emulsion packets is not unique. Chung *et al.* [3] have used a multiple capacitance contact time distribution. Yoshida *et al.* [2] have used both random and uniform surface renewal functions and Kunii and Levenspiel [4] are of the view that the latter is probably most representative of an emulsion flowing smoothly past the heat exchange surface. In view of this the authors have used the uniform surface renewal as a simplification. The authors are presently engaged in the investigation of the effect of these distributions.

5. The typographical errors are as indicated by the correspondent. The mistake is regretted.

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REFERENCES

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2. K. Yoshida, D. Kunii and O. Levenspiel, Heat transfer mechanism between wall surface and fluidized bed, *Int. J. Heat Mass Transfer* **12**, 529–536 (1969).
3. B. T. F. Chung, L. T. Fair and C. L. Hwang, A model of heat transfer in fluidized beds, ASME Paper No. 71-HT-2 (1971).
4. D. Kunii and O. Levenspiel, *Fluidization Engineering*, p. 293. John Wiley, New York (1969).

ANNOUNCEMENT

LDA SYMPOSIUM 1975

A SYMPOSIUM with the title, "The Accuracy of Flow Measurement by Laser Doppler Methods" will take place from 25 to 28 August 1975, at the Technical University of Denmark in Copenhagen.

The purpose of the event is to establish the value of measurements with laser Doppler anemometry by discussing possible precision and sources of errors inherent in the applied methods of measurements. The Scientific Committee of the Symposium includes leading world scientists in the field of laser Doppler anemometry. Papers and short contributions are invited and relevant abstracts are required before 1 February 1975.

The Symposium is of interest to those who develop, use or are considering future use of laser Doppler anemometry. For further details and programme please write to:

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