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Erratum

Erratum to "Conjugate heat/mass transfer from a circular cylinder with an internal heat/mass source in laminar crossflow at low Reynolds numbers" [Int. J. Heat Mass Transf. 48 (2005) 419–424] and "Unsteady conjugate heat/mass transfer from a circular cylinder in laminar crossflow at low Reynolds numbers" [Int. J. Heat Mass Transf. 47 (2004) 2469–2480]

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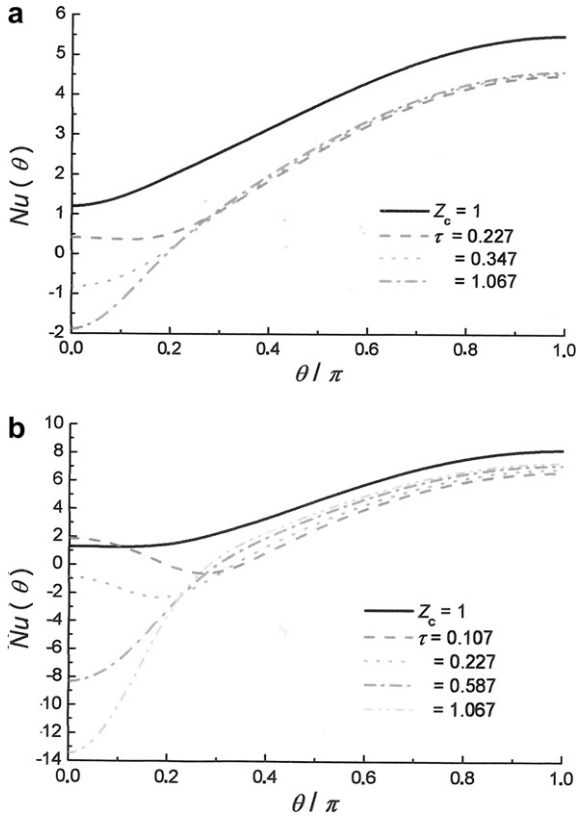

Fig. 1. Local *Nu* numbers for different times; (a) $Re = 2$, $\Phi = 100$, $\Xi = 1$; (b) $Re = 20$, $\Phi = 100$, $\Xi = 0.5$.

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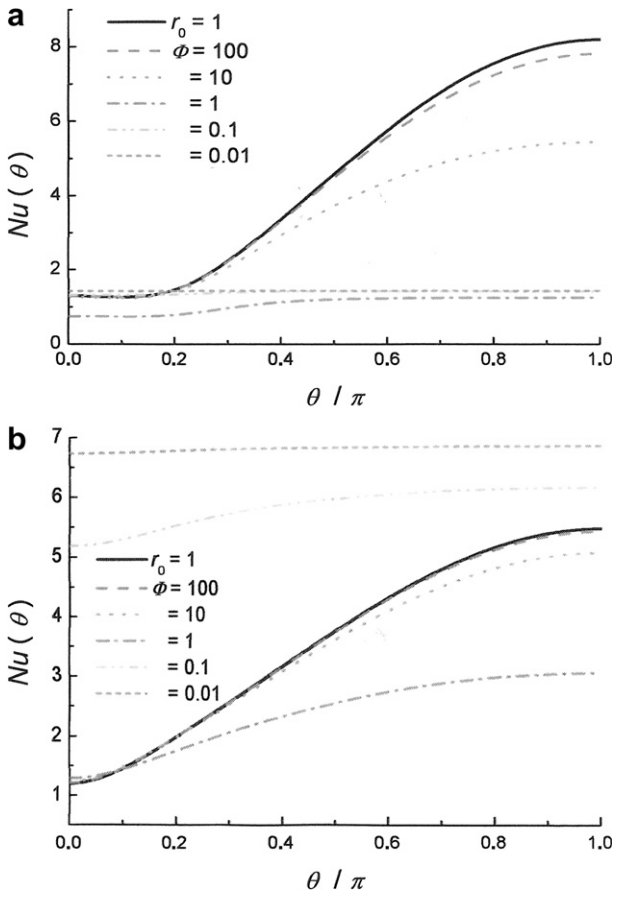

Fig. 2. The effect of Φ on the local Nu numbers for $Re\ Pr = 100$; (a) $Re = 20$, $r_0 = 0.25$; (b) $Re = 2$, $r_0 = 0.75$.

The conjugate heat/mass transfer from a circular cylinder in laminar crossflow was analysed in [1,2]. Unfortunately, due to an error occurred during data processing, the figures that present in [1,2] the local Nu number are wrong.

Fig. 1 of the present note shows the accurate values of the local Nu number for the case analysed in [1]. Thermal wake exists only in the region of the rear stagnation point ($\theta = 0$). For flow without separation ($Re = 2$ – Fig. 1a), the evolution of the thermal wake phenomenon is similar to that observed for spheres in creeping flow. For flow with separation ($Re = 20$ – Fig. 1b) thermal wake occurs in the vicinity of the flow separation point. Thus, the discussions from [1] about the thermal wake phenomenon and the last column of Table 5 should be ignored. All the other results presented in [1], i.e. asymptotic values of the average Nu values (overall and fractional), time variation of the cylinder average temperature, the influence of kinetic and thermodynamic ratios on conjugate transfer, remain valid.

Fig. 2 of the present note shows the accurate values of the local Nu number for the case analysed in [2]. In all cases the local Nu number increases from the rear stagnation point ($\theta = 0$) to the front stagnation point ($\theta = \pi$). All the other results presented in [2] remain valid.

I apologize to the Editors and Readers of the International Journal of Heat and Mass Transfer for the inconveniences generated by these errors.

References

[1] Gh. Juncu, Unsteady conjugate heat/mass transfer from a circular cylinder in laminar crossflow at low Reynolds numbers, Int. J. Heat Mass Transf. 47 (2004) 2469–2480.

[2] Gh. Juncu, Conjugate heat/mass transfer from a circular cylinder with an internal heat/mass source in a laminar crossflow at a low Reynolds number, Int. J. Heat Mass Transf. 48 (2005) 419–424.