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Corrigendum

Corrigendum to: "Critical heat flux prediction for water boiling in vertical tubes of a steam generator" [Internat. J. Thermal Sci. 44 (2) (2005) 179–188]

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As the authors of the paper *Critical heat flux prediction* for water boiling in vertical tubes of a steam generator published in the issue 44 (2005) 179–188 of the International Journal of Thermal Sciences we want to make the following explanation about some sentences, ideas and equations that appear in our paper which were borrowed from previous works published in the International Journal of Heat and Mass Transfer by Celata et al. [1,2]. We think that the citations through our paper do not grant the appropriated credit to the contribution of Dr. G.P. Celata et al. into the development of our research reported in the mentioned paper.

In first place we always have recognized the great contribution that the Celata et al. have done for the sublayer dryout theory, initially formulated by Lee and Mudawar [3], by proposing a mechanistic model where the use of experimental constants and correlations is avoided. In our work we use a set of equations called *Martinelli's temperature profile* for turbulent flow (labeled as (4), (5) and (6)) in the same manner as Celata et al. did it by first time in their paper mentioned in Ref. [1] (equations labeled as (7), (8), (10), (11) and (12) of our paper). Due to an interpretation error this fact is not mentioned in our paper, only is alluded to the original author of this set of equations [4], however we emphasize that Celata et al. were the first in using it for the applications of critical heat flux prediction.

Celata and co-workers also introduce some concepts for predicting the critical heat flux under the context of the sublayer dryout theory, which are the basis of our model. Our model is an extension of the sublayer dryout theory for predicting critical heat flux in vertical tubes under non-uniform heating. On this basis we use a concept proposed by Celata et al. where the term *superheated layer* is defined (Ref. [1, p. 350]). The superheated layer is an idea that allows calculating a set of parameters for predicting the critical heat flux. In Section 3.3 *CHF prediction* of our paper we mentioned this concept and we think that there is not an appropriated reference to the original work presented by Ref. [1].

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References

- G.P. Celata, M. Cumo, A. Mariani, M. Simoncini, G. Zummo, Rationalization of existing mechanistic models for the prediction of water subcooled flow boiling critical heat flux, Internat J. Heat Mass Transfer 37 (Suppl. 1) (1994) 347–360.
- [2] G.P. Celata, M. Cumo, A. Mariano, G. Zummo, The prediction of the CHF in water subcooled flow boiling, Internat J. Heat Mass Transfer 38 (6) (1995) 1111–1119.
- [3] C.H. Lee, I. Mudawar, A mechanistic critical heat flux model for subcooled flow boiling, Internat. J. Heat Mass Transfer 14 (1988) 711–728.
- [4] R.C. Martinelli, Heat transfer to molten metals, Trans. ASME 69 (1947) 947–951.

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