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     1. Equations

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Please do not use references in this Conclusion.

Nomenclature

a – mesh size, m

Afin – fin surface area, m2

Lex – fin extended length, m

Lc – fin length, m

n – number of mesh elements, -

Pl – longitudinal fin pitch, m

Pt – transversal fin pitch, m

rin – outer radius of a plain tube, m

T – fin surface local temperature, K

Tb – fin base temperature, K

Tcz – ambient temperature, K

w – fin width, m

x, y – cartesian coordinates

α - heat transfer coefficient, W/(m2·K)

λ – thermal conductivity, W/(m·K)

δ – fin thickness, m

η – fin efficiency, -

Acknowledgments

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Chew K.H., Klemeš J.J., Wan Alwi S.R., Abdul Manan Z., 2013, Industrial implementation issues of Total Site Heat Integration, Applied Thermal Engineering, 61, 17–25.

Klemeš J.J. (Ed), 2013, Handbook of Process Integration (PI): Minimisation of Energy and Water Use, Waste and Emissions, Woodhead Publishing Limited, Cambridge, UK.

Klemeš J.J., Varbanov P., Lam H.L., 2009, Water Footprint, water recycling and Food Industry Supply Chain, Chapter In: K Waldron (Ed.), Waste management and co-product recovery in food processing, Vol 2, Woodhead Publishing Limited, Cambridge, UK, 134 – 168.

Raissi K., 1994, Total site integration, PhD Thesis, University of Manchester Institute of Science and Technology, Manchester, UK.

US DoE, 2016, Steam Turbines, US Department of Energy <energy.gov/sites/prod/files/2016/09/f33/CHP-Steam%20Turbine.pdf> accessed 24.07.2017.