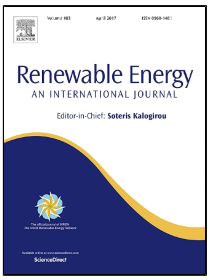
Accepted Manuscript



Estimating heat transfer losses caused by alkali salt deposits in biomass combustion

Joaquín Capablo, Joan Salvadó

PII:	S0960-1481(16)31150-8
DOI:	10.1016/j.renene.2016.12.085
Reference:	RENE 8422
To appear in:	*Renewable Energy*
Received Date:	04 January 2016
Revised Date:	07 December 2016
Accepted Date:	28 December 2016

Please cite this article as: Joaquín Capablo, Joan Salvadó, Estimating heat transfer losses caused by alkali salt deposits in biomass combustion, *Renewable Energy* (2016), doi: 10.1016/j.renene.2016.12.085

Highlights:

- Prediction of the alkali salt deposits formation on the surface of a pipe of a heat exchanger.
- Overall heat balance performance in a counter current heat exchanger operating in the superheated vapor zone of a biomass boiler.
- Determination of the evolution over time of these deposits and evaluation of the heat transfer rate between the combustion gases and the superheated vapor.
- Parametric analysis regarding gas temperature, temperature and pressure of the superheated vapor, diameter of the heat exchanger tube, the gas velocity, concentration of alkali salts in the gases and particle size of the aerosols.