(4) Increasing the contact surface increases the heat transfer coefficient, which causes the decrease in the volume of the interstitial medium.

(5) The shape of asperities has a strongly effect on the heat transfer coefficient especially for high thermal conductivity materials, the best values of this coefficient were obtained for a contact has semi-elliptic asperities.

We recommend:

(1) To develop a theoretical model taking into account the roughness effects, thermal conductivity of solids in contact and convection coefficient of the interstitial fluid in order to introduce a function relating these parameters.

(2) To make an experimental study in order to extend the range of roughness and thermal conductivity.

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NOMENCLATURE

A	Surface, (m^2)
D	Width, (m)
k	Thermal conductivity, (W/m·K)
H	Convection coefficient, $W/m^2 \cdot K$
Q	Heat flux, (W/m^2)
S^*	Actual contact rate
Ra	Surface Roughness, (μm)
T	Temperature, (K)
TCC	Thermal contact conductance ($W/m^2 \cdot K$)
ΔT	Jump temperature, (K)
z	Coordinate, (m)

Subscripts

1	Solid 1
2	Solid 2
A	Area
R	reel
Ch	Hot
F	Cold