Accepted Manuscript

Hydrodynamic boundary layer of dilute emulsions of high-viscosity drops

R.B. Rebouças, I.R. Siqueira, T.F. Oliveira

PII: S0377-0257(16)30184-7
DOI: 10.1016/j.jnnfm.2017.02.007
Reference: JNNFM 3880

To appear in: *Journal of Non-Newtonian Fluid Mechanics*

Received date: 9 September 2016
Accepted date: 20 February 2017

Please cite this article as: R.B. Rebouças, I.R. Siqueira, T.F. Oliveira, Hydrodynamic boundary layer of dilute emulsions of high-viscosity drops, *Journal of Non-Newtonian Fluid Mechanics* (2017), doi: 10.1016/j.jnnfm.2017.02.007

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- Viscous boundary layer of dilute emulsions over a flat plate are analyzed.
- Prandtl's hypothesis are employed to simplify the fully coupled, nonlinear model.
- The dimensionless velocity profiles within the emulsion boundary layer are similar.
- An integral formulation for the boundary layer thickness is developed.
- The boundary layer thickness decreases with the capillary number.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/4995551

Download Persian Version:

https://daneshyari.com/article/4995551

Daneshyari.com