

International Conference on

Chemical Engineering

September 12-14, 2016 Phoenix, USA

Removal of sulfides and oil from produced water

Ana Karla Costa de Oliveira

Federal Institute of Rio Grande do Norte, Brazil

Produced water are complex mixtures which contain a large number of contaminants including finely dispersed oil, metals, and gases such as H_2S and CO_2 , that are originated from oil and natural gas. In this paper, we used solvent extraction to recover sulfides. We used three commercial amines belonging to the alkyl amine group as extractants, which were dissolved in aviation kerosene (JET FUEL). In this research, real samples of produced water from the oil industry with initial concentration of 0.660 mg/L H_2S were used. The parameters studied were: Amine/JET FUEL ratio (0.25 v/v) and organic/aqueous phase ratio (1/3 v/v). After the tests, it was concluded that the highest extraction efficiency occurred with the amine Duomeen which removed 76% of sulfides, followed by Arquad 2C-75, showing 59% removal efficiency and Duommen T which removed 40%.

Biography

Ana Karla Costa de Oliveira has completed her PhD from UFRN, Brazil. She is a Teacher of Petroleum and Gas from Federal Institute of Rio Grande do Norte, Brazil. She has several publications in the areas of Oil, Produced Water and Oil Derivatives. She was the Coordinator of the Oil and Gas course in IFRN, Brazil, in the year 2010.

karla.costa@ifrn.edu.br

Notes: