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(54) Title of the Invention: **Low pressure mixing system for desalting hydrocarbons**  
Abstract Title: **Low pressure mixing system for desalting hydrocarbons**

(57) A method and system for reducing the salt content of a crude oil stream includes using a quill to disperse a water stream into the crude oil and then routing the mixed oil/water stream through a plurality of mixing stages. The water stream may include a wash water that has been preconditioned with recycled effluent water. Each mixing stage increases the homogeneity of the mixed oil/water stream. The first and third mixing stages are preferably lower pressure stages relative to the second mixing stage, which provides pressure effective for flowing the mixed oil/water stream through the third and fourth mixing stages. Upon exiting the fourth mixing stage, the mixed oil/water stream is electrostatically treated in a dual frequency separator vessel or a dual polarity separator vessel.

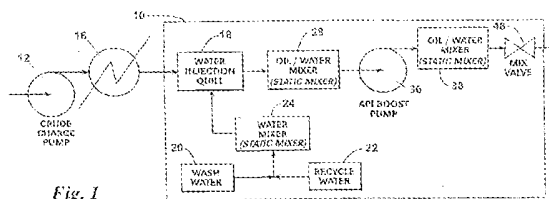


Fig. 1