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- (71) **Applicant:** HALLIBURTON ENERGY SERVICES, INC. [US/US]; 10200 Bellaire Boulevard, Houston, TX 77072 (US).
- (72) **Inventors:** TUNHEIM, Ola; Eivindsholen 4, N-4340 Bryne Rogaland (NO). FREESE, Robert, P.; 8115 Highway Nc 902, Pittsboro, NC 27312 (US). MACLENNAN, James, Robert; 6a Canal St., Aberdeen Grampian AB24 3ET (GB).
- (74) **Agents:** KAISER, Iona, N. et al.; McDermott Will & Emery LLP, 500 North Capital Street, N.W., Washington, DC 20001 (US).
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(54) **Title:** SYSTEMS AND METHODS FOR MONITORING OIL/GAS SEPARATION PROCESSES

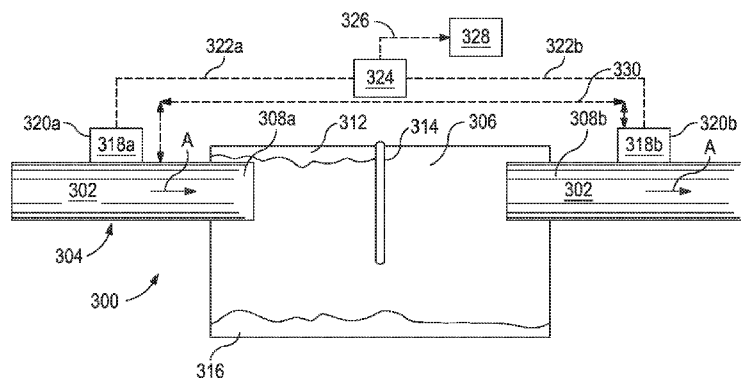


FIG. 3

(57) **Abstract:** Disclosed are systems and methods for analyzing an oil/gas separation process. One method includes conveying a fluid to a fluid separator coupled to a flow path, the fluid separator having an inlet and a discharge conduit, generating a first output signal corresponding to a characteristic of the fluid adjacent the inlet with a first optical computing device, generating a second output signal corresponding to the characteristic of the fluid adjacent the discharge conduit with a second optical computing device, receiving the first and second output signals with a signal processor communicably, and generating a resulting output signal with the signal processor indicative of how the characteristic of the fluid changed between the inlet and the discharge conduit.