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(US). O'NEIL, Daniel; 2677 Ethan Allen Highway, St. Albans, VT 05428 (US).

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(74) Agent: MILLER, Richard G.; LORD Corporation, 111 Lord Drive, Attn: IP Legal Dept., Cary, North Carolina 27511 (US).

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(71) Applicants: LORD CORPORATION [US/US]; 111 Lord Drive, Cary, North Carolina 27511 (US). CALFRAC WELL SERVICES LTD.; 411 - 8th Avenue SW, Calgary, Alberta T2P 1E3 (CA).

(72) Inventors: NORRIS, Mark A.; 113 Bruce Drive, Cary, North Carolina 27511 (US). TOWNSEND, Christopher, P.; 336 Maeck Farm Road, Shelburne, Vermont 05482 (US). ROBINSON, Michael; 2383 Ferry Road, Charlotte, Vermont 05445 (US). WISE, Leslie Michael; 471-20 Ave. NW, Calgary, Alberta TWM 1C5 (CA). KESSLER, Gregory; 1224 Grouse Avenue, Brighton, Colorado 80601

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(54) Title: SYSTEM AND METHOD FOR MONITORING COMPONENT SERVICE LIFE

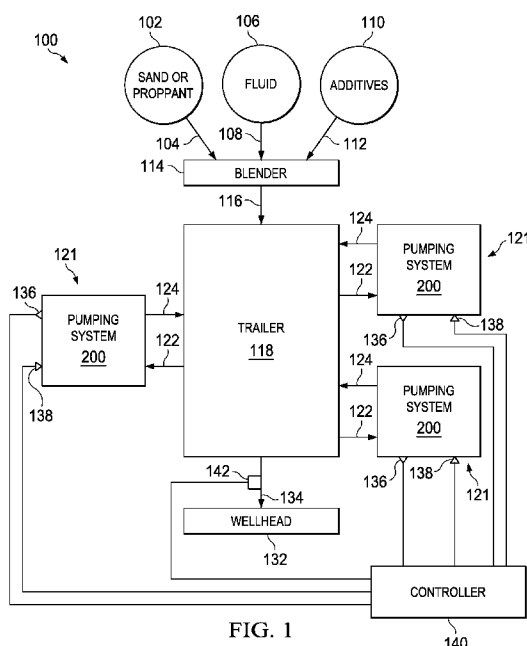


FIG. 1

(57) Abstract: Systems and methods are disclosed herein that include providing a service life monitoring system that includes a rotatable component and a rotatable measurement interface disposed on the rotatable component, the rotatable measurement interface having at least one torsional strain gauge configured to measure a strain of the rotatable component, a strain monitor controller configured to receive the measured strain of the rotatable component, and a wireless data transmission component configured to wirelessly communicate with the strain monitor controller to receive the measured strain, determine at least one of a power, rotational speed, torque, and service life of the rotatable component in response to receiving the measured strain of the rotatable component as a result of the measured strain of the rotatable component, and control at least one of the power, the rotational speed, and the torque of the rotatable component.



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