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(71) Applicant: WEATHERFORD TECHNOLOGY

HOLDINGS, LLC [US/US]; 2000 St James Place, Houston, Texas 77056 (US).

(72) Inventors: STACHOWIAK, JR., John E.; 11909 Spencer

Road - FM 529, Houston, Texas 77041 (US). GALLE, Justin R.; 11909 Spencer Road - FM 529, Houston, Texas 77041 (US).

(74) Agent: MCDERMOTT, Sean P.; Cabello Hall Zinda, PLLC, 801 TRAVIS ST, STE 1610, Houston, Texas 77002 (US).

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(54) Title: VALVE ASSEMBLY FOR DOWNHOLE PUMP OF RECIPROCATING PUMP SYSTEM

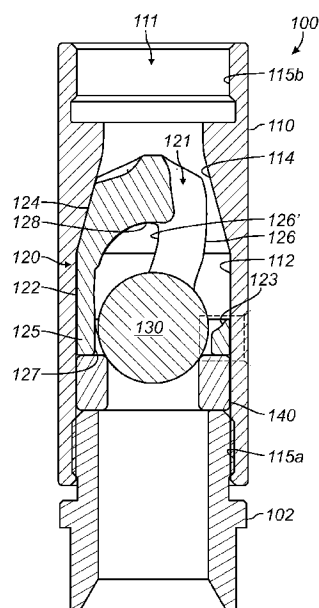


FIG. 3A

(57) Abstract: A downhole pump for a reciprocating system includes a barrel and a plunger. The barrel couples to a tubing string and has a standing valve. The plunger couples to a rod string and has a traveling valve. Either valve can include a housing, an insert, a ball, and a seat. The insert defines a ball stop and has a ball passage. The insert positions in the flow passage of the housing, and one of the ends engages a shoulder in the passage. The insert is secured with metallic material metallurgically affixed between at least a portion of the insert and the flow passage. Brazing material can be brazed at the end of the insert to metallurgically affix the insert in the passage. The ball is positioned in the insert, and the seat is positioned adjacent an end of the insert. The valve then incorporates into components of the pump.

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