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Galle et al.

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[54] **METAL SEAL HYDRAULIC COUPLING**

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[75] Inventors: **Gary Galle; Justin Whitehead**, both of Houston, Tex.

Primary Examiner—Kevin Lee
Attorney, Agent, or Firm—Felsman, Bradley, Vaden, Gunter & Dillon, L.L.P.

[73] Assignee: **ABB Vetco Gray, Inc.**, Houston, Tex.

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[57] **ABSTRACT**

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A hydraulic coupling having a lower tubular member and an upper tubular member for sealing engagement one with the other. The lower and upper members are maintained in axial engagement by an axial load. The lower member and the upper member each have an annular body having an axial bore therethrough for the passage of fluid. A metal, concentric inner annular seal leg and outer annular alignment leg extend from the body of the upper member, defining an annular sealing recess between the seal legs. An annular metal sealing portion or wall extends from the body of the lower member and has an inner diameter that defines a sealing surface for insertion into the sealing recess for sealingly engaging the inner annular seal leg. The sealing recess has a backup elastomer ring, which is axially compressed by the sealing portion. When the couplers are made up, the metal-to-metal seal is achieved due to an interference fit between the coupler halves. Because the seal is a straight-bore seal, the location of the final position of the couplers relative to one another can vary.

Related U.S. Application Data

[60] Provisional application No. 60/078,917, Mar. 20, 1998.

[51] **Int. Cl.**⁷ **F16L 37/28**

[52] **U.S. Cl.** **137/614.04; 285/331; 285/917**

[58] **Field of Search** 137/614.04, 614, 137/614.03; 285/331, 917

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10 Claims, 1 Drawing Sheet

