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Galle

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[54] METAL SEAL HYDRAULIC COUPLING

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[58] Field of Search 137/614, 614.02, 614.03, 137/614.04, 614.05; 251/149.6, 149.7, 149.1, 149.3; 285/331, 917, 332.3

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[57] ABSTRACT

An hydraulic coupling has a male member and a female member for sealing engagement one with the other. The male and female members are maintained in axial engagement by an axial load. The male member and the female member each have an annular body having an axial bore therethrough for the passage of fluid. Metal, concentric inner and outer annular seal legs extend from the body of the female member, and define an annular sealing recess between the seal legs. The seal legs have opposed tapered walls that define female sealing surfaces. An annular metal sealing wedge extends from the body of the male member and has inner and outer tapered walls that define male sealing surfaces for insertion into the sealing recess for sealingly engaging the female sealing surfaces. The axial load through the male and female members is supported solely though the male and female sealing surfaces so that the axial load results in a wedge-like action between the sealing recess and the sealing wedge. The wedge-like action deflects one of the seal legs thus allowing surface contact between the male and female sealing surfaces.

16 Claims, 3 Drawing Sheets