

ABSTRACT

In carrying out the principles of the present invention, in accordance with an embodiment thereof, an annular choke apparatus, and methods of use, are provided for use within a subterranean well. In broad terms, a choke tool apparatus is provided which includes an outer housing having an outer housing wall with at least one flow port therethrough, and a variable annular flow-area choke disposed within the outer housing, the variable annular flow-area choke having a first generally tubular member sealingly disposed within the outer housing, the first tubular member having a shoulder with a sealing surface, a second generally tubular member slidingly and sealingly disposed within the outer housing, the second tubular member having a shoulder with a sealing surface, the second member movable between a sealed position wherein the sealing surfaces are in sealing abutment and an open position wherein the sealing surfaces are spaced apart. The sealing surfaces preferably provide a metal-to-metal seal. The variable annular flow-area choke described herein preferably provides for infinite adjustment between open and closed positions for precise flow regulation. The apparatus may include an actuator, locking, adjustment and biasing assemblies.



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