ABSTRACT

METAL TO METAL ANNULUS SEAL WITH ENHANCED LOCK-DOWN CAPACITY

In accordance with embodiments of the present disclosure, a seal assembly for sealing and locking a casing hanger to a wellhead includes a lower seal body, an upper seal body connected to the lower seal body, an inner lock ring disposed between the upper seal body and the lower seal body, an external lock ring engaging the upper seal body, and an energizing ring. The lower seal body is structured and arranged to form a seal with the casing hanger and the wellhead. The upper seal body includes a load portion that overhangs a load shoulder of the casing hanger. At least a portion of the energizing ring is disposed within an inner groove disposed within the upper seal body. The energizing ring locks the inner lock ring into forcible engagement with the casing hanger, and locks the external lock ring into engagement with the wellhead.

FIGURE 1