MULTIFUNCTIONAL KEY DESIGN FOR METAL SEAL IN SUBSEA APPLICATION

Abstract of the Disclosure

A wellbore sealing assembly can include a sealing ring, an energizing ring, and a multifunctional key for engaging the sealing ring and the energizing ring. The multifunctional key can have a key body, a guide member, and a retainer stud. The key body can be located in an aperture in a sidewall of the sealing ring and the guide member and retainer stud can protrude through the sidewall into a guide slot and recess of the energizing ring. Downward force on the energizing ring can cause the retainer stud to shear away while the guide member travels in the guide slot to prevent rotation of the energizing ring relative to the sealing ring. The guide member can also aid in complete seal retrieval by locking against the bottom of the key-way slot in the energizing ring.

Figure 1