ACTIVE CASING HANGER HOOK MECHANISM

ABSTRACT

A subsea wellhead assembly includes a housing with a bore. A hanger is lowered into the housing, the hanger having at least one centralizing finger with a hook for engaging a corresponding hook an activation ring carried by the hanger via a shear pin. A load ring is carried on the hanger and supported initially within a recess formed on the exterior of the hanger. At the correct depth within the housing, coinciding with a shoulder on the inner diameter of the housing, the pin is sheared under the weight of the casing string and the hooks disengage to allow the load ring on the hanger to slide outward and create a path for the casing load to be transferred from the hanger to the hanger load ring, to a housing load ring, and ultimately the housing.

Figure 1