Intercasing Centralizer Sub
Casing Equipment Developed by Halliburton for Cased Well Integrity

Halliburton has developed an intercasing centralizer sub (ICCS) that can be run as an integral part of almost any casing string. Bow-spring and rigid versions can be supplied in almost any casing size, grade, or thread and for use in the most challenging wellbore configurations.

Description
The centralizer sub body is manufactured from materials and casing threads that match the casing in which the sub is to be installed. The inside diameter of the sub is designed to match the drift requirements on the connections being used.

A specially designed bow-string centralizer coupled with Halliburton’s new slim-wedge lock-limit clamps enables this assembly to be run into wellbores with very small annular space. The slim-wedge lock-limit clamp, together with the specially designed bow-spring centralizer, maintains the centralizer performance in the openhole section that is required by API specification 10D for bow-spring centralizers.

The bow-spring centralizer sub can pass through annular spaces below 3/8-in. per side without compromising centralizer performance in underreamed hole sections. By enabling proper centralization of the casing in underreamed hole sections, maximum mud displacement can be achieved. Proper centralization coupled with proper cementing practices help ensure that desired zonal isolation is achieved.

Additionally, the intercasing centralizer sub can be supplied with solid centralizer blades that supply a fixed standoff within a given wellbore.

Features and Benefits
- Production casing
- Intermediate casing or liners
- Underreamed hole sections
- Bow-spring option for maximum standoff that allows pipe rotation before or during cementing
- Rigid option for reduced drag applications
The ICCS is specifically designed to be run as an integral part of almost any casing string. Bow spring and rigid versions can be supplied in almost any casing size, weight, grade, or thread and for use in the most challenging wellbore configurations while being able to rotate casing to bottom.

The slim-wedge lock-limit clamp is the key component of the ICCS that allows the bow spring centralizer to remain securely in place while running casing through tight restrictions. The low profile of the slim-wedge lock-limit clamp ensures material stacking does not occur between the previous casing inside diameter and the outside diameter of the centralizer sub.

Case Histories
Halliburton has supplied many ICCS product solutions for the use in the Gulf of Mexico, offshore West Africa, and in Eastern Europe ranging in sizes from 5-in. through 16-in. Several notable runs in the Gulf of Mexico validated the ICCS design as capable of providing sufficient casing standoff in underreamed hole sections.

- Case 1 - Fifty 5-in. ICCS were run through 20-in. casing and cemented in a 7 1/2-in. open hole. A super Fill Type PSB was run and operated successfully in this well.
- Case 2 - Twenty-eight 7 5/8-in. ICCS were run through 9 5/8-in. casing and successfully cemented in a 9 1/2-in. open hole.
- Case 3 - Eighty-five 7 5/8-in. ICCS were run on 1,053 meters of casing through 9 5/8-in. 47 lb casing. Hanger problems were encountered after running approximately 200 meters of drillpipe that resulted in separation of the running tool from the liner hanger. The liner fell to bottom after separation occurred. Customer advised ICCS supplied by Halliburton performed well without excessive drag or associated running problems.

For more information on Intercasing centralizer subs, contact your local Halliburton representative or email cementing@halliburton.com.

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