PILOT technologies

PL-SCC

Stage cementing collar PL-SCC

Stage cementing collar are used in the oil and gas industry during the well construction process. They are placed within any type of casing string to provide an intermediate passage to the annulus. These tools are generally used to protect weak formations from excessive hydrostatic pressure, cement widely separated zones, and reduce mud contamination from cement.

The stage cementing collar consist of stage collars and port collars. The collars are generally made of match-grade steel and may be available in special weight ranges to optimize strength and internal dimensions.

Stage collars are available in both mechanical and hydraulic versions. Mechanical tools are opened and closed using freefall plugs or pump-down-closing plugs to select and shift the appropriate internal sleeve(s). Once the first stage is complete, the lower sleeve is pumped down to uncover the ports by seating the free-fall (or pump-down) opening plug and applying pressure. The second stage is pumped and the ports are closed again by seating and applying pressure to the larger closing plug. Once closed, the stage collar cannot be reopened.

THE EQUIPMENT SET INCLUDES:

- step cementing coupling;
- stop clutch;
- top separating plug;
- bottom separating plug.

CONSTRUCTIVE ADVANTAGES:

- running and cementing wells in difficult geological and technological conditions;
- availability of the redundant option of flushing holes opening (hydraulics);
- locking of the closing sleeve;
- adjustment of flushing orifices opening pressure (hydraulics);
- wide range of working pressure;
- anti-rotation performance of plugs and their fixation;
- elements of PL-HST couplings are destroyed by a PDC bit;
- reliability and ease of use.

Casing, in / (mm)	Tooling sizes , in / (mm)		Maximum pressure, psi / (Mpa)		Load capacity, t
	Outer diameter max.	Inner diameter min.	Activation	Testing	
5 '' (127)	5,90'' (150)	4,25'' (108)	5800 (40)	14500 (100)	150
5 1/2'' (139,7)	7,67'' (195)	4,76'' (121)	5800 (40)	14500 (100)	180
5 3/4'' (146)	7,67'' (195)	5'' (127)	5800 (40)	14500 (100)	190
6 5/8'' (168,3)	8,26'' (210)	5,94'' (151)	5800 (40)	14500 (100)	200
7'' (178)	8,26'' (210)	6,25'' (159)	5800 (40)	14500 (100)	200
9 5/8'' (244,5)	11,18'' (284)	8,85'' (225)	4350 (30)	13050 (90)	250
12 3/4'' (323,9)	14,84'' (377)	11,88'' (302)	3625 (25)	7250 (50)	300
13 3/8'' (339,7)	15,43'' (392)	12,63'' (321)	3625 (25)	6530 (45)	300

* design dimensions can be changed and manufactured to individual technological conditions of the customer's well

MADE IN UKRAINE