Expro Petrotech® Sampling Services

EXPRO FLUIDS

Info sheet: S2009 / rev_01/13

PAR - pressure activated release

The scope of the tool is to offer a trigger system that allows us to trigger BHS tool by applying pressure on the wellbore annulus. The system needs a rupture disc to isolate the annulus pressure from the PAR until the well is conditioned for sampling. A suitable rupture disc must be carefully picked in close relation with the DST crew to fit in with the other RD-operated tools.

Benefits:

The PAR is designed to operate up to 20,000 psi annulus pressure, at maximum 200 ºC and therefore has a wide application area.

The PAR system fits inside the BHS tool standard Clock Housing, so no tool modification is necessary.

The PAR is designed to be an alternative method for MAT triggering of BHS tools, and must be run in a Sampler Carrier (SIMBA or FasTest carrier).

When the MAT is removed from the tool string, we have spare length below the sampler, and can therefore offer to run a memory gauge combined with the sampler.

The PAR is working with a stroking action caused by the annulus pressure. The annulus pressure acts on a plunger (piston) inside the pressure cylinder, and the plunger movement acts on the stroke piston. The stroke piston is limiting the PAR stroke-length.

The PAR is a simple hydraulic and mechanical device that will work if pressure is applied.

All PAR seals are made with double O-ring and back-up ring and is therefore a robust design that will work as expected within the temperature and pressure ratings given.

Technical Specification:

Design Code

ASME Section VIII, division 2. Calculation for cylinder shell.

All materials for pressure exposed parts are according to NACE MR 175 / ISO 15156

Maximum Allowable Working Pressure

20,000 psi @ 400 ºF

138 MPa @ 200 ºC

Maximum Allowable Test Pressure

30,000 psi @ ambient Temp.

207 MPa @ ambient Temp.