

PROGRESSING CAVITY PUMPS

Drilling - Completion - Well Control
Drilling - Completion

E- 457

OBJECTIVES

The course is dedicated to the design, commissioning and trouble shooting of the progressing cavity pumps (PCP).

At the end of the course, the participants:

- know how to select a PCP,
- know the operating procedures,
- have a good knowledge of operational problems.

▲ Who should attend?

Production engineers and supervisory staff.

COURSE CONTENT

GENERAL DESCRIPTION OF THE PCP (PROGRESSING CAVITY PUMP) 0.5 day

Principle, basic theory

Main data, description of the rotor, description of the stator

Rotation transmission, fundamentals parameters

CHARACTERISTICS AND SELECTION OF PCP 0.5 day

Pump capacity, head, characteristics

Pump selection: composition of a PCP, pump sizing

Positioning of the pump in the well:

- position with respect to the dynamic level
- position with respect to the bubble point level

Evaluation of the minimum head of the pump:

- pressure generated by the column of fluid to be discharged
- pressure drops generated by the viscosity of the effluent

SURFACE DRIVEN PUMPS 0.5 day

Influence of the tubing diameter, weight of the rods

Tensile stress on rods generated by the head of the pump and by the mechanical resistant torque

Resistant torque generated by the viscosity of the effluent in the tubing

Stresses in the sucker rods

DRIVING POWER 0.5 day

Drive head - Drive system

Determination of the hydraulic power of the pump

Remarks on tubings and sucker rods

INSTALLATION, START-UP AND MAINTENANCE 0.5 day

Pre-operational checks

Running in the stator and the tubings

Running in the rotor and the sucker rods

Setting of the drive head and of the drive system

Pre-start checks, start-up, operating procedures

Intervention time

Maintenance

TYPICAL UTILIZATION CASES 0.5 day

Oil and gas

Heavy oil

Special systems (speed multiplier, electrical submersible motor)

▲ Duration

3 days

▲ Dates & Location

Non scheduled

May be organized for a single company

▲ Tuition Fees

to be agreed upon

▲ Course Coordinator

Denis PERRIN

Ref. **PRO / PCPE**

