Crude Oil Lifting with Method
Vertikal Screw Conveyor

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ABSTRAK

Artificial lift is method for lift crude oil from behind well to surface. Due to reservoir pressure not enough energy to push oil to surface or not economical if flow with natural.

In design artificial lift with method vertical screw conveyor. The screw conveyor as push or carry oil from behind well to surface. With design capacity production will be get circle or rpm, length of screw, diameter shaft, bearing, key, belt and pulley as transfer energy from electrical motor. Design final task for well H9-B2 with capacity 250 BPD (barrel per Day) need 114 rpm, with angel screw ($\alpha$) 36.89°, speed of material (q): 15 kg/m, length of screw conveyor (L): 1038 m with diameter 25 mm, Bearing type 3305 SKF angular double bearing with ID: 25 mm, key : 4,57 x 3,17 x 76,2 mm with taper key , Diameter pulley 1 : 50,88 mm with 1000 rpm, diameter pulley 2 : 508 mm with 97 rpm and motor 5,5 Kw TW-25 (7 HP).

From result of design above, vertical screw conveyor can application as method alternative artificial lift in lift crude oil at old well in Indonesia.

Key word : Conveyor, screw, vertical, poros, crude oil Artificial lift