



Polymer (ASP) Injection for Enhanced Oil Recovery (EOR) (4)

Location	India (Installation: 2019)	Hydra-Cell model	D35XESGNNEHB (14 W +1 S)
Type of application	Polymer Injection	Flow rate	4.0 M3/hr (1057 gph)
Liquid	Water Polymer	Pressure	100 bar (1450 psi)

Application details

The G35 pump is being used for Enhanced Oil Recovery measures through Chemical EOR methods using Alkali-Surfactant-Polymer (ASP) injection at ONGC Viraj Field of Ahmedabad, Gujarat, India Asset.

In the Viraj field, Alkaline Surfactant Polymer (ASP) Slug is injected in the reservoir @ 1120 m³/day, through 14 injector wells (i.e. @ 80 m³/day per well). The ASP Slug is prepared by mixing 2.5 wt % Soda Ash, 0.25 % Surfactant and 1500 ppm Polymer in water, and is stirred in inline mixer for homogeneous mixing/maturing before injection.

Injection of ASP solution is carried out by 14 injection wells through two injection manifolds to be installed within the plant. Each injection manifold is having 7 injection lines. Each injection line is provided with individual reciprocating pump for injection.

A competitor had projected a spares consumption of 140K Euros for this installation operating for 2 years. But with Hydra-Cell in this installation close to 3 years of operation (20K+ hours) the only maintenance required has only been regular oil changes.

Advantages of Hydra-Cell pump on this application

- · Low shear pumping action
- No dynamic seals or packing
- · No leakage & wastage of polymer
- · Small footprint
- · Virtually "pulse-free" flow
- Lowest cost of ownership considering 5 years O&M contract under HAL Offshore scope

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