عنوان مقاله:

Chemorheology of Polymer Gel Filled by Inorganic Material Used in Gas Well Water Shutoff Treatments

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

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خلاصه مقاله:

Excessive water production causes major economic loss due to decreased gas production and increased costs of separation and disposal of large amounts of produce water. Other production-related problems include increased corrosion rates and a higher tendency for emulsion and scale formation. Therefore, there is a need to reduce excessive water production. One promising technique to block water propagation in situ is the application of polymer gels. In this paper, polyacrylamide which filled with sodium silicate was crosslinked with N,N'- methylene bisacrylamide. This system is used as candidate for gas well water shutoff treatments. The chemorheology of this organic-inorganic crosslinked gel was investigated using stress viscometry as a function of powder volume fraction (0.05 - 0.2), polymer concentration (8-12 wt.%), crosslinker concentration (0.1- 0.5 wt.%) and temperature (80 - 125 °C).

کلمات کلیدی:

Chemorheology, Polymer gel, Inorganic material, Gas well, Water shutoff