

## عنوان مقاله:

Sand Production Control in Sandstone Reservoirs Using a Modified Urea-formaldehyde Resin

## محل انتشار:

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## خلاصه مقاله:

Several techniques have been used for sand production control in sandstone reservoirs. The main objective of this research is to present a suitable resin to be used as a consolidation agent in oil reservoirs. To achieve this purpose, urea-formaldehyde resin, phenol-formaldehyde resin, and modified urea-formaldehyde resin were selected to be studied. Core samples were made by the sand sample provided from the oil fields of southern parts of Iran with an average absolute permeability of 500-600 mD and an average porosity of 15-20% combined with various percentages of each resin. The core samples are tested for permeability, porosity, and compressive strength measurement. The results show that in the consolidation process with resin, modified urea-formaldehyde resin, as a consolidating agent, is more suitable than the other two types of resin. The consolidated sand samples of this resin had a compressive strength between 3100 and 4150 psi, permeability between 980 and 6823 mD, and porosity between 8 and 98%.

## کلمات کلیدی:

Chemical Consolidation, Resin, Permeability, Porosity, Compressive Strength

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