

Preparation and investigation of self-healing gel for mitigating circulation loss

Ren Wang¹, Cheng Wang^{1,2}, Yifu Long¹, Jinsheng Sun^{1*}, Luman Liu¹, Jianlong Wang¹

¹*CNPC Engineering Technology R&D Company Limited, Beijing 102206, P. R. China*

²*College of Chemistry and Chemical Engineering, Southwest Petroleum University, Chengdu 610500, P. R. China*

*Corresponding author: Jinsheng Sun(ORCID: 0000-0003-1939-2801, sunjsdri@cnpc.com.cn (Jinsheng Sun))

Supporting figures

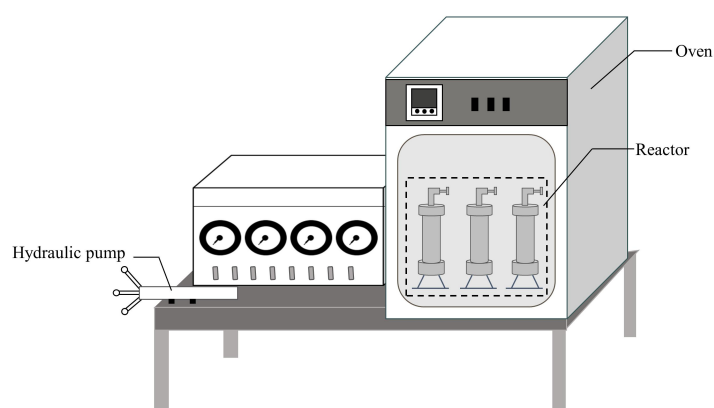


Fig. S1. Schematic diagram of the temperature–pressure reaction device.



Fig. S2. Picture of the temperature–pressure reaction device.



Fig. S3. Picture of the plugging performance test experiment.

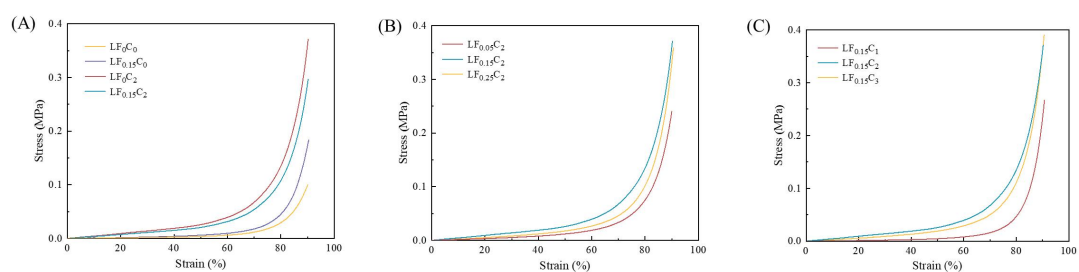


Fig. S4. (A)~(C) Compressive strain–stress curves of the different samples.

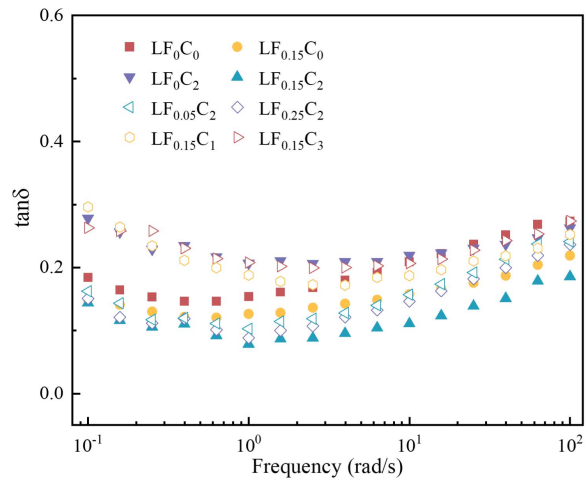


Fig. S5. The $\tan\delta$ of gels under a frequency sweep.



Fig. S6. The pictures of LCM in fractured metal core.