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DEVELOPMENT OF OPTIMISED METHODS FOR BATCH CEMENTING OF PRODUCTION CASINGS

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Abstract:

This research focuses on developing and implementing innovative methods for batch cementing production casings in the oil and gas industry, aiming to enhance well reliability and extend operational lifespan. Laboratory tests were conducted to determine the optimal cement mortar composition and analyse its physicochemical properties in a controlled environment. The proposed method involves sequentially introducing discrete portions of cement mortar, followed by accumulation in the casing and property modification using selected chemical reagents. Industrial testing demonstrated significant improvements in the mechanical strength and sealing of the cement. The final portion of the slurry exhibited enhanced protective properties, crucial for operational safety and the long-term performance of casing strings.

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