

Anti-wax nickel-based coating for stainless steel pipeline

ABSTRACT

This study aims to determine the efficacy of nickel-based coating as wax repellent for stainless steel pipelines. Two variables for nickel-based coating were studied namely nickel sulphate and sodium hypophosphate. Results show that 100% and 50% reduction of wax deposition for coating with sodium hypophosphate and coating with nickel sulphate respectively. These values indicate that nickel-based coating can reduce wax deposition on the pipe surface. It also depicts that coating with more sodium hypophosphate serve better anti-wax coating compared to nickel-based coating with more nickel sulphate. SEM analysis shows good surface morphology for the coating and displays a microstructure that plays an important role in protecting stainless steel surfaces.