

عنوان مقاله:

Simulation of Fast Filling Process for Natural Gas Vehicle (NGV) Fuel Tanks Based on AGA-8 Equation of State

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 9

نویسندگان:

s.r Moosavi - *Department of Chemical Engineering, Faculty of Engineering, University of Kurdistan, Sanandaj ۶۶۱۷۷, Iran*

m Khamforoush - *Department of Chemical Engineering, Faculty of Engineering, University of Kurdistan, Sanandaj ۶۶۱۷۷, Iran*

s.a Khamforoush - *School of Mechanical Engineering, Shahrood University of Technology, Shahrood, Iran*

k Rahimzadeh - *National Iranian Oil Products Distribution Company, Kurdistan Region, Sanandaj, Iran*

خلاصه مقاله:

In this study, fast filling process of NGV cylinders is simulated in a FORTRAN based computer program. In this model, AGA-8 equation of state was utilized to compute compressibility factor and other required thermodynamic properties such as internal energy, enthalpy and specific heat of natural gas. The accuracy of model was evaluated by comparing the acquired results with real data. The real data was gathered for three kinds of NGV tanks at a CNG station. Our comparison demonstrated that, there is a reasonable agreement between modeling and experimental data at the whole charging period. Furthermore, it is demonstrated that temperature elevation of natural gas during the fast filling process is the main factor that prevents the 100% full fill in each refueling

کلمات کلیدی:

AGA-8 equation of state, compressed natural gas, fast filling process

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