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# C3Po1C-08: Completion of vapor-liquid equilibrium measurements of the helium-neon system at temperatures below 36 K

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The efficiency of hydrogen liquefaction and other cryogenic applications is potentially increased by using mixed refrigerants. The cryogenic phase equilibria test stand CryoPHAEQTS at KIT enables the measurement of physical property data of all cryogenic fluid mixtures in a temperature range from 10 K to 300 K and at pressures up to 150 bar.
Neon and helium are essential components of low-boiling mixtures. The vapor-liquid equilibrium (VLE) of the helium-neon system was measured for three different isotherms at 27.0 K, 32.9 K, and 35.9 K. These measurements allow for comparison with existing isotherms from literature. This contribution presents the completion of the isotherm measurements at 27.0 K, which allows for direct comparison with experimental results from two other sources. The comparison aims to resolve some inconsistency present in the existing data.

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