Impurities and structural defects in one-dimensional electron systems with repulsive interactions as well as in antiferromagnetic spin chains are usually relevant perturbations leading at low energies to a system consisting of finite segments with open ends. It is therefore of great experimental relevance to understand how open boundaries affect thermodynamic quantities like the susceptibility or the specific heat. Recently, it has been demonstrated that for the anisotropic spin-1/2 chain (XXZ-model) with $1/2 < \Delta \leq 1$ the boundary contributions to the susceptibility and specific heat show a singular temperature dependence obeying a power law with an anomalous dimension [1]. I will present here some exact results for the boundary contributions to the free energy in the XXZ-model based on the exact Bethe ansatz solution and bosonization [2,3]. I will also compare the analytical results valid for small temperatures and fields with numerical data obtained by the density-matrix renormalization group.

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