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(54) Title: ELECTRICAL RESISTANCE HEATER FOR CRYSTAL GROWING APPARATUS AND ITS METHOD OF USE

(57) Abstract

An electrical resistance heater for use in a crystal puller used for growing monocrystalline silicon ingots according to the Czochralski method comprises a heating element sized and shaped for placement in a housing of the crystal puller generally above a crucible in spaced relationship with the outer surface of the growing ingot for radiating heat to the ingot as it is pulled upward in the housing relative to the molten silicon. The heating element has an upper end and a lower end. The lower end of the heating element is disposed substantially closer to the molten silicon than the upper end when the heating element is placed in the housing. The heating element is constructed such that the heating power output generated by the heating element gradually increases from the lower end to the upper end of the heating element.

