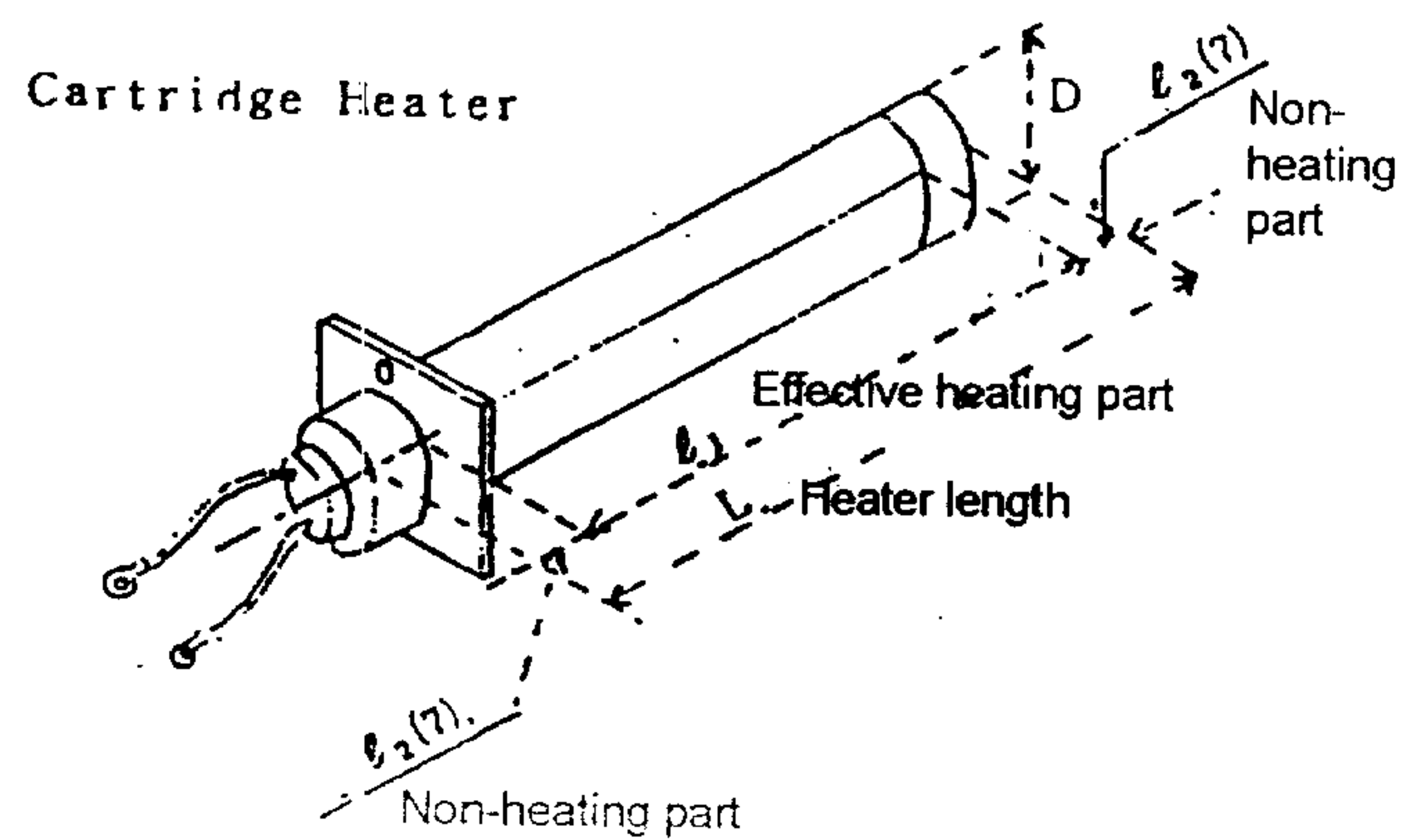
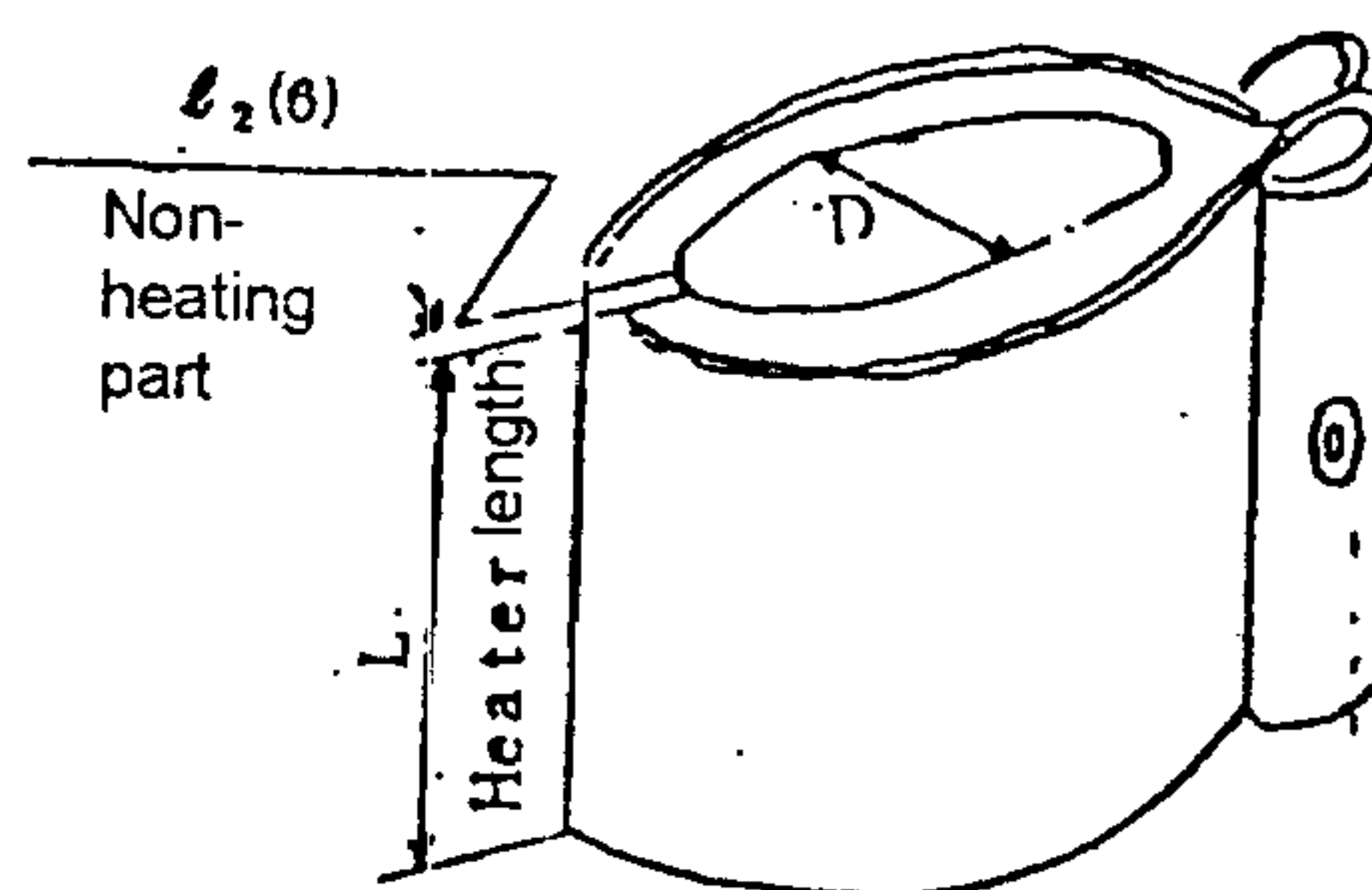


Standard name	Temperature control	Registration No.	KES G-Q857A
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1. Watt density and heating temperature



Band Heater



(1) Calculating equation of Watt density

For Cartridge heater

$$SD = \frac{W}{\pi D \times l_1} \leq 5 \text{ W/cm}^2$$

Here, SD : Watt density (W / cm²)

D : Heater diameter (mm)

L : Heater length (cm)

l₁ : Effective heating part of a heater (cm)

l₂ : Non-heating part of a heater (cm)

W : Watt value

Standard name	Temperature control	Registration No.	KES G-Q857A
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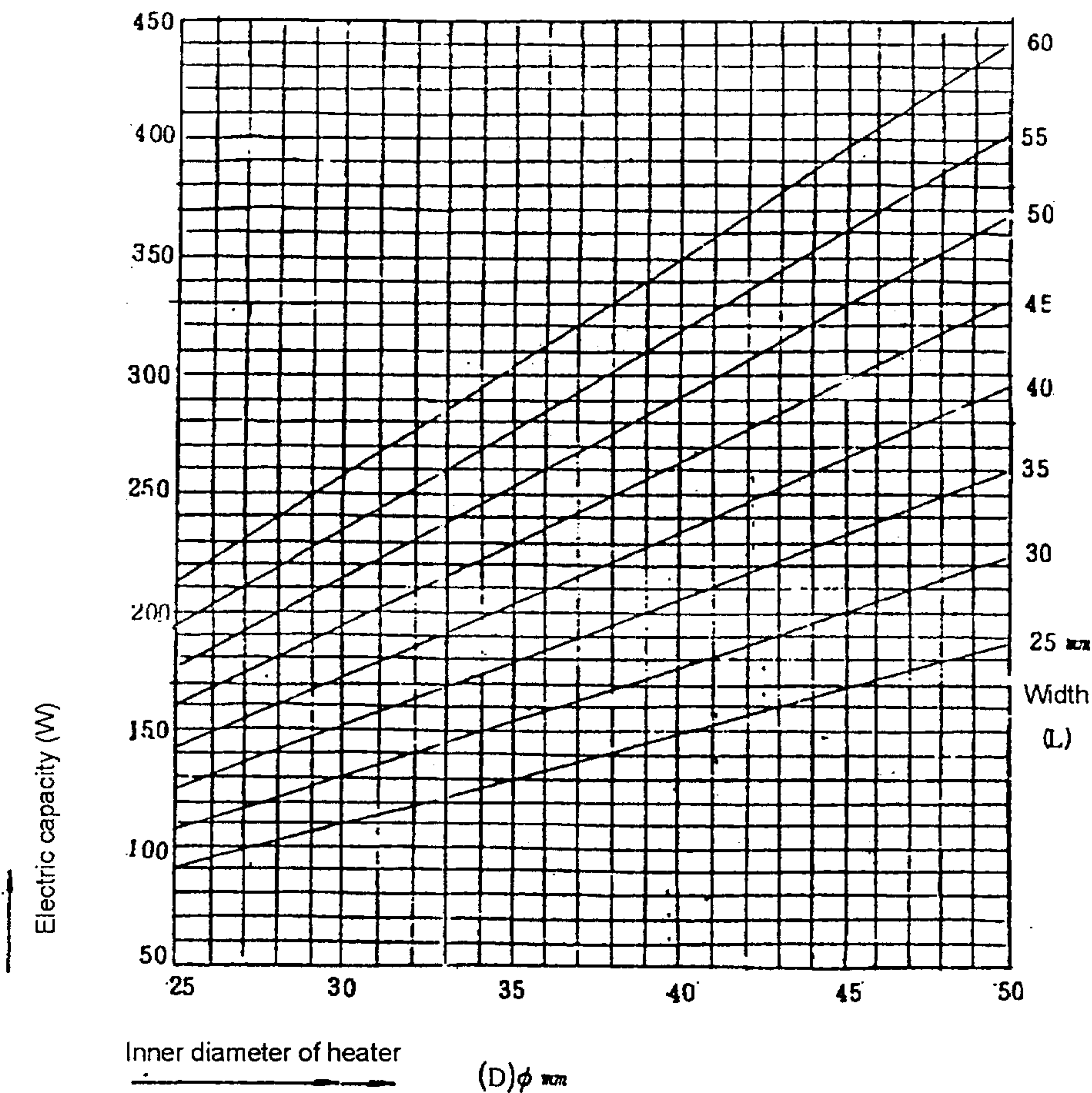
- For Band heater

$$SD = \frac{W}{(\pi D - l_2) \times L} \leq 5W/cm^2$$

- Design the heater with Watt density less than $SD \leq 5W / cm^2$.
(If Watt density would be high, life of a heater is short)

2. Capacity relationship table of Band heater

Watt density = 5W / cm²



This table shows the relationship between heater capacity maximum and heater size at the contact state and at 250 °C