Willam Book Page 156

How To Calculate Beta in Ac Voltage Controller Has RL load Using Curves

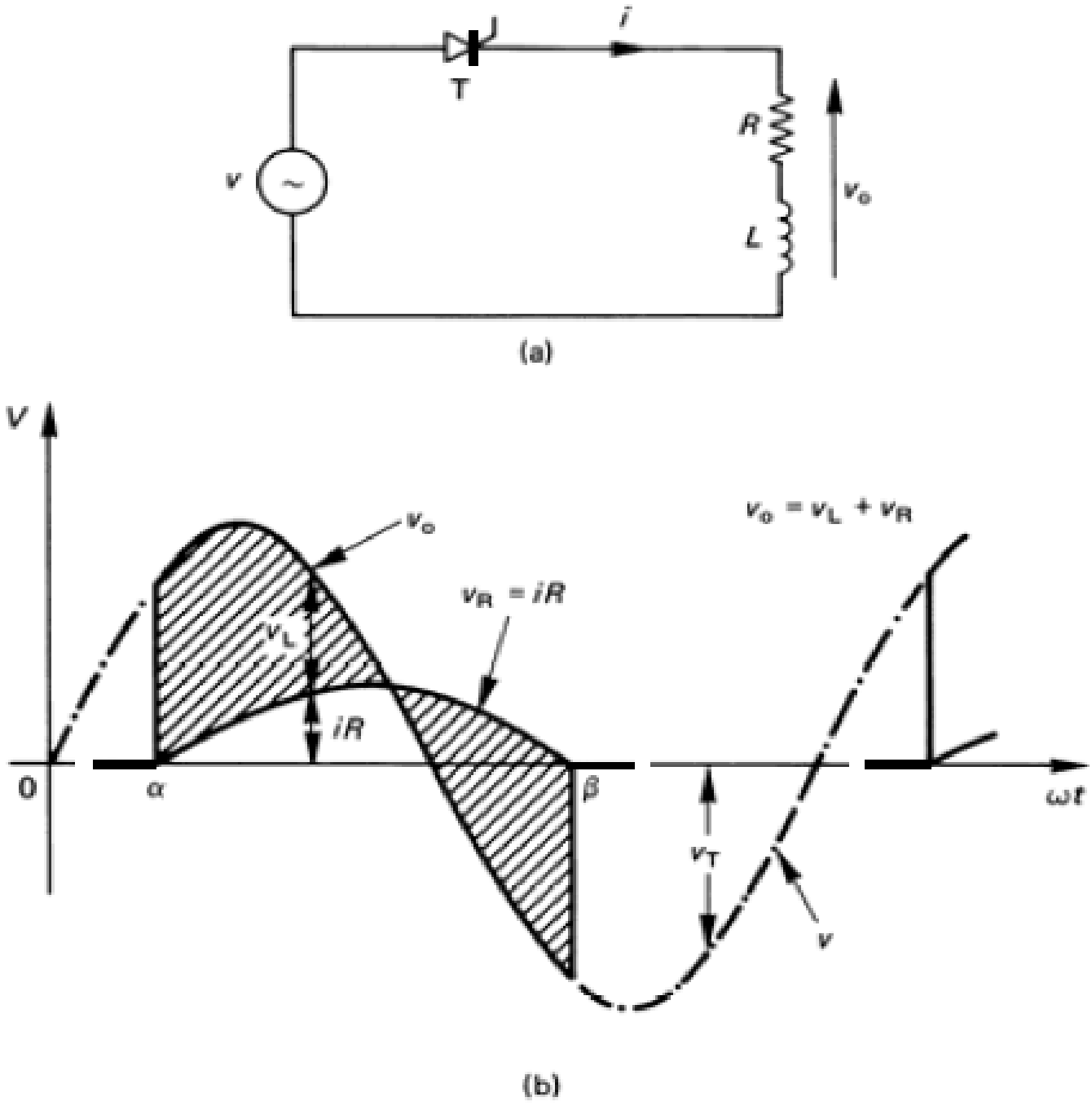

Figure 11.6. *Single-phase half-wave controlled converter: (a) circuit diagram and (b) circuit waveforms for an inductive load.*

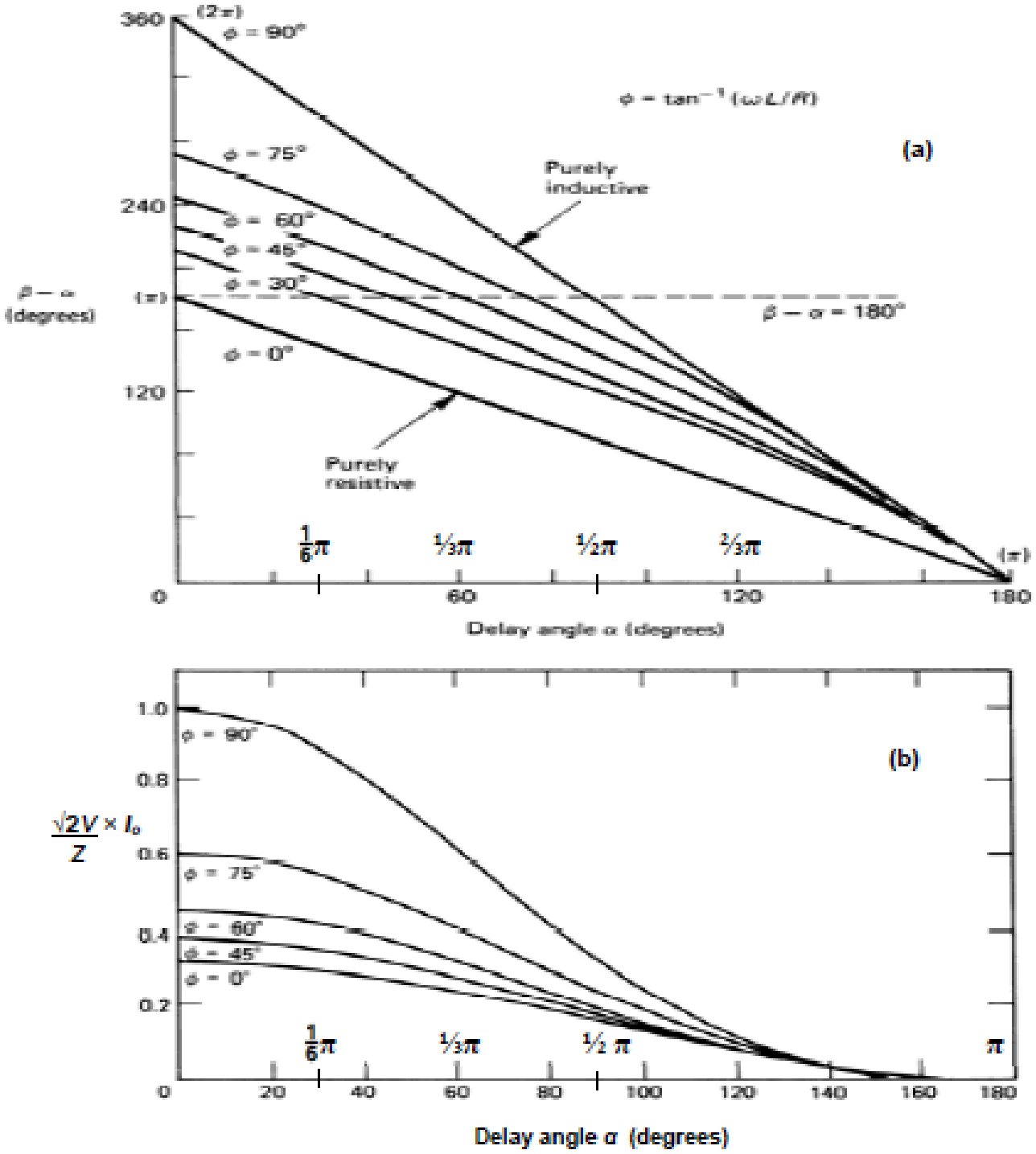

Figure 11.7. *Half-wave, controlled converter thyristor trigger delay angle α versus: (a) thyristor conduction angle, β-α, and (b) normalised mean load current.*

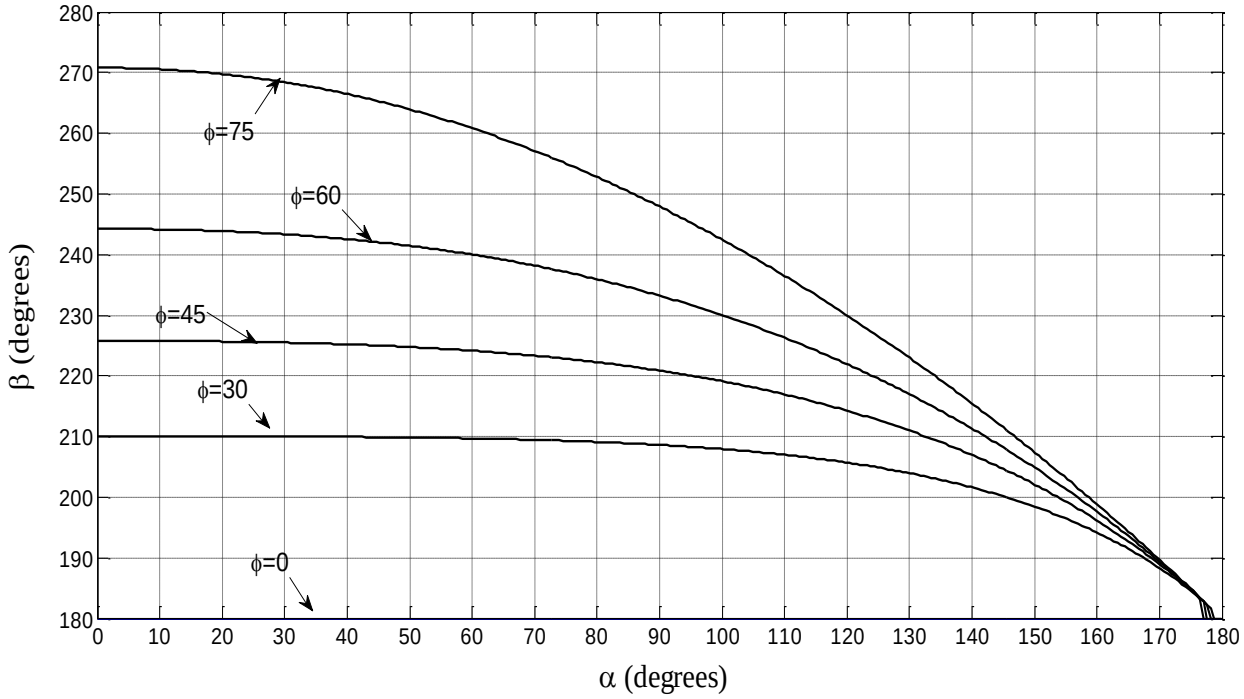

Fig. (1): Relation between *thyristor trigger delay angle (α) versus thyristor extinction angle angle (β) (at using RL load)*

Programs used to get Fig. (1) :
alpha_and_beta.m & BETA.m

Shepherd_ Book Page 331 & 334
How To Calculate Beta Using Curves in AC Voltage Controller Has RL load

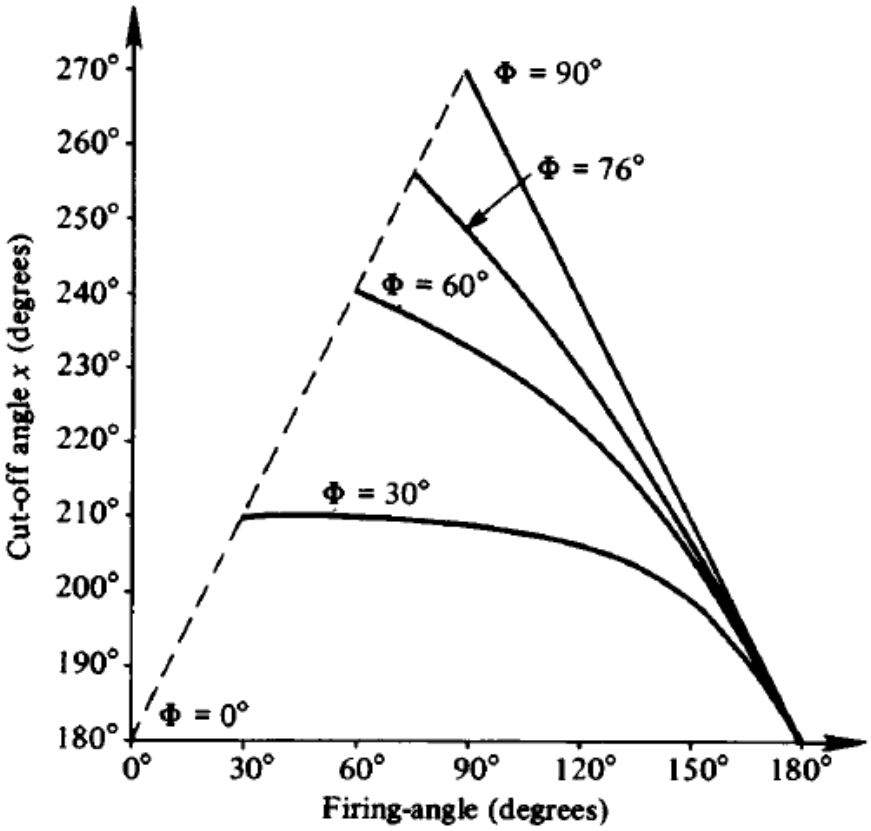

Fig. 8.15 Extinction angle versus firing-angle for single-phase controller. Series *R–L* load.

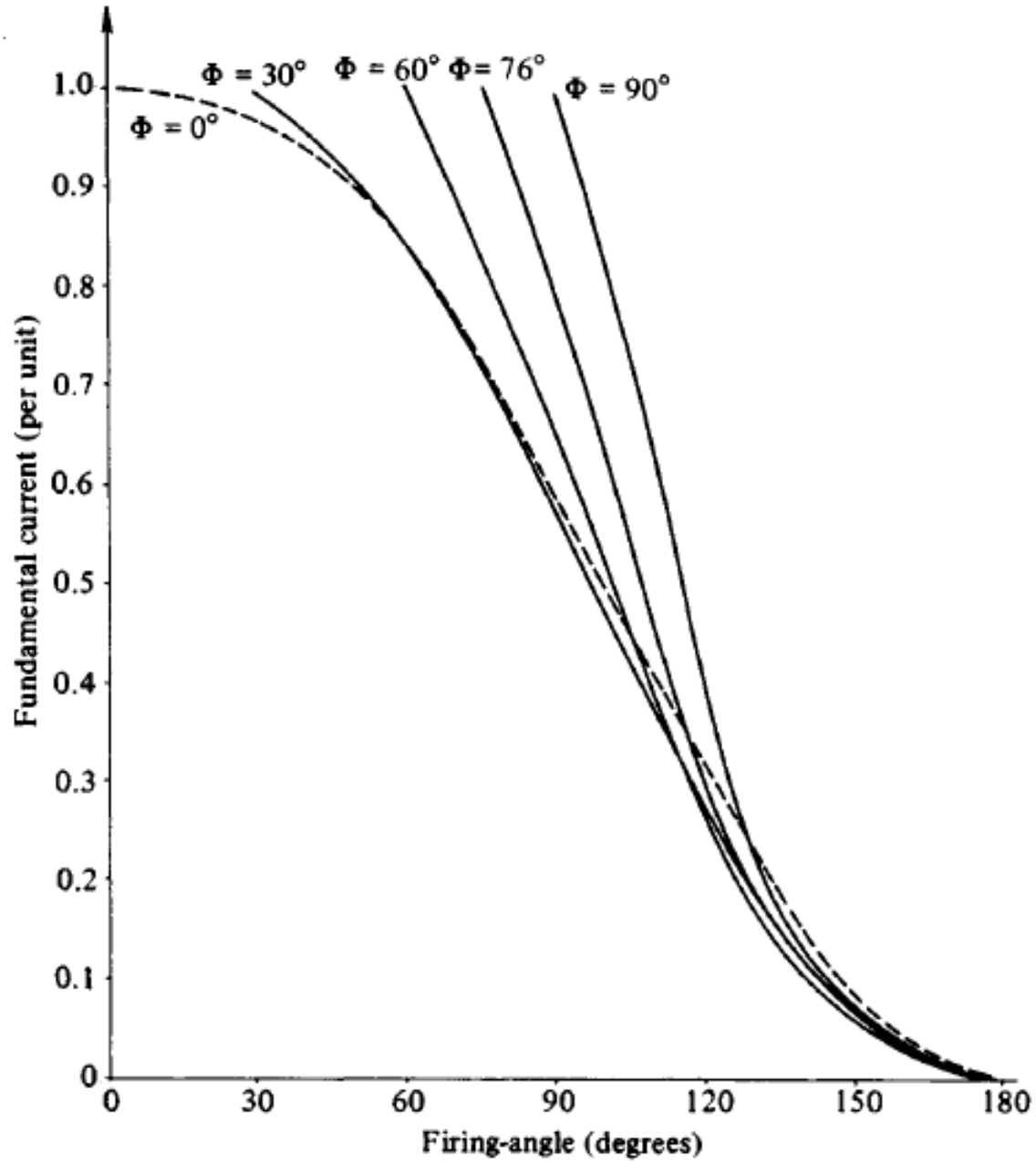

Fig. 8.18 Fundamental current versus firing-angle for single-phase controller. Series *R–L* load.