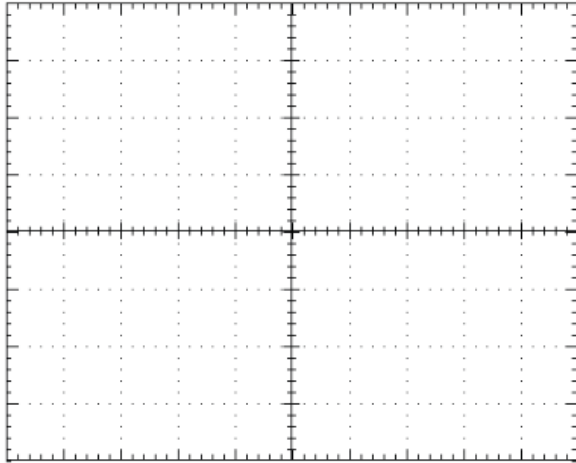


EXPERIMENTAL RESULTS

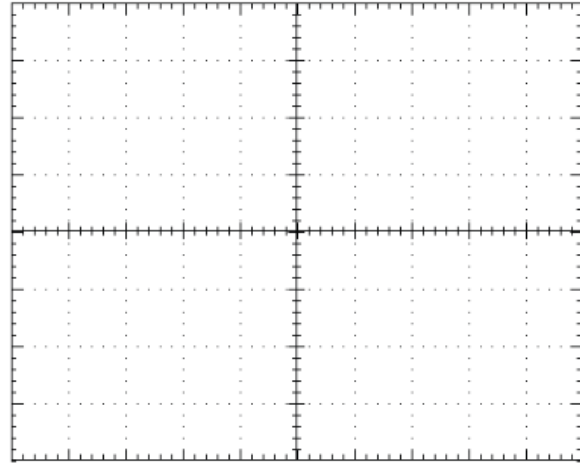
1. AC-AC Converters

1.1. AC Voltage Control with Reverse Parallel Thyristors

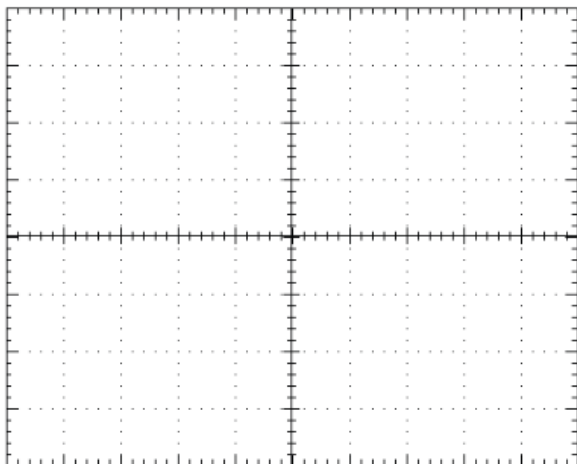
1.1.1. Reverse Parallel Thyristors (With Ohmic Load)



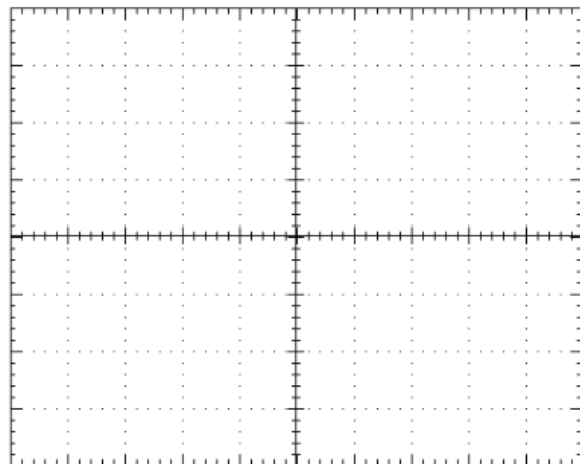
(a) $\alpha = 0^\circ$ Output waveforms on load



(b) $\alpha = 45^\circ$ Output waveforms on load



(c) $\alpha = 90^\circ$ Output waveforms on load

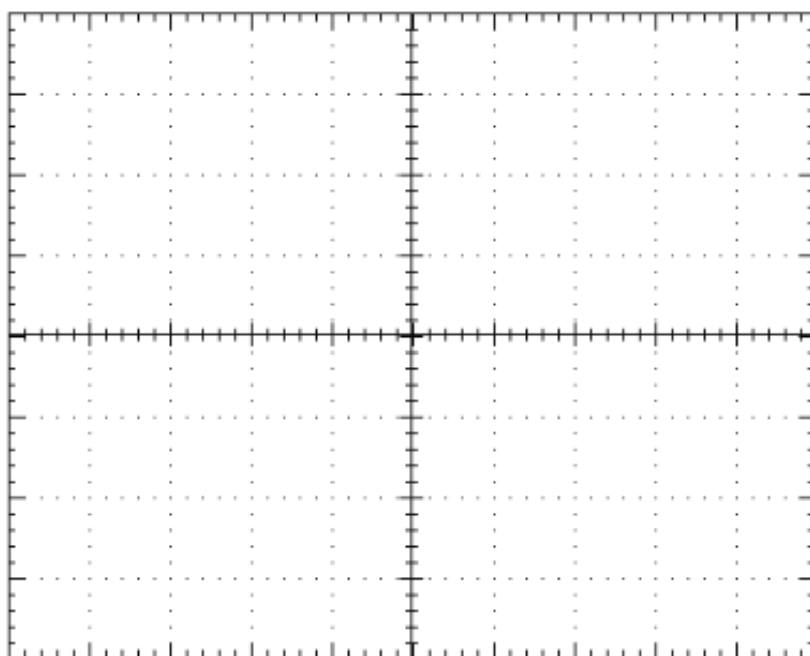


(d) $\alpha = 135^\circ$ Output waveforms on load

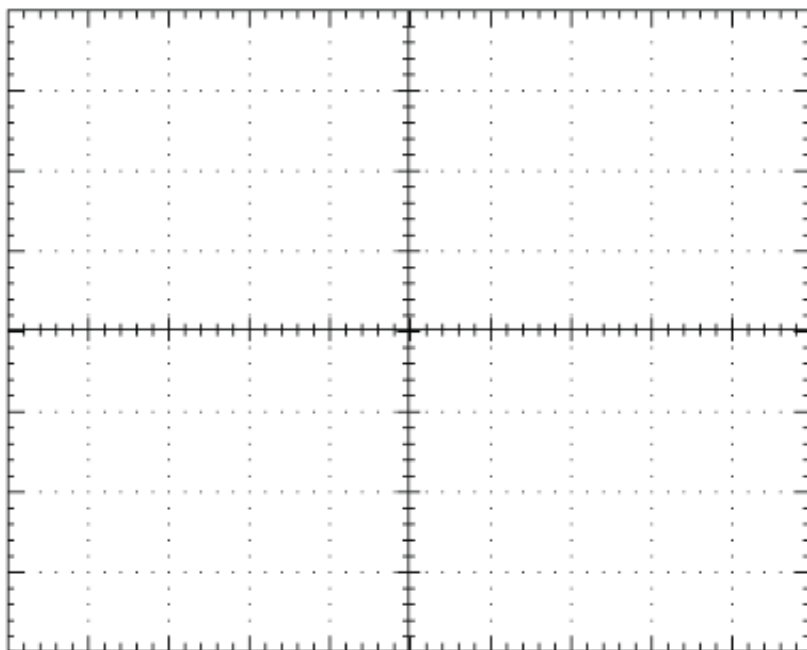
- Interpret the results obtained.

Table 1. Simulation results for reverse parallel connected thyristors

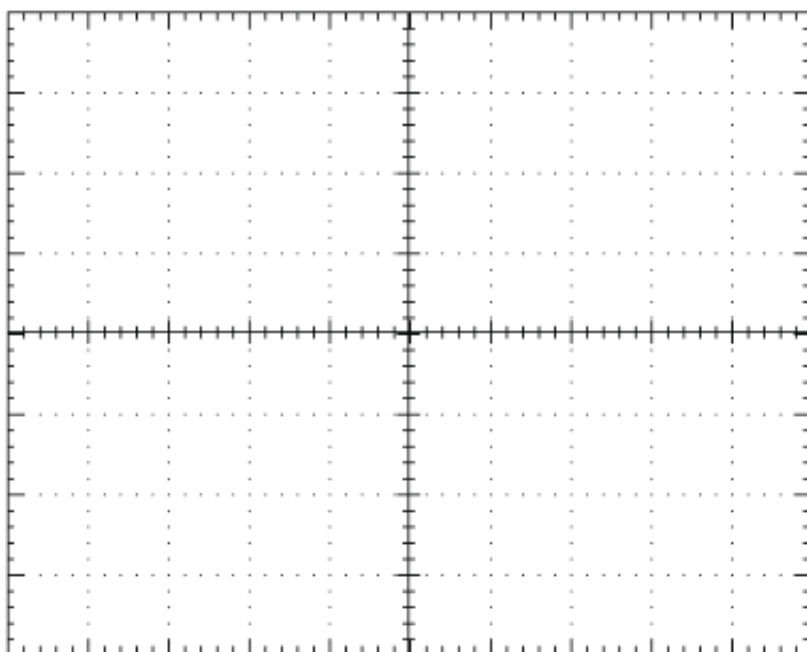
α	$V_o(TRMS)$	$I_o(TRMS)$	$P_o(RMS)$	$P_o(Average)$
0°				
45°				
90°				
135°				

1.2.1. Reverse Parallel Connected Thyristors (Inductive Load) Experiment Results

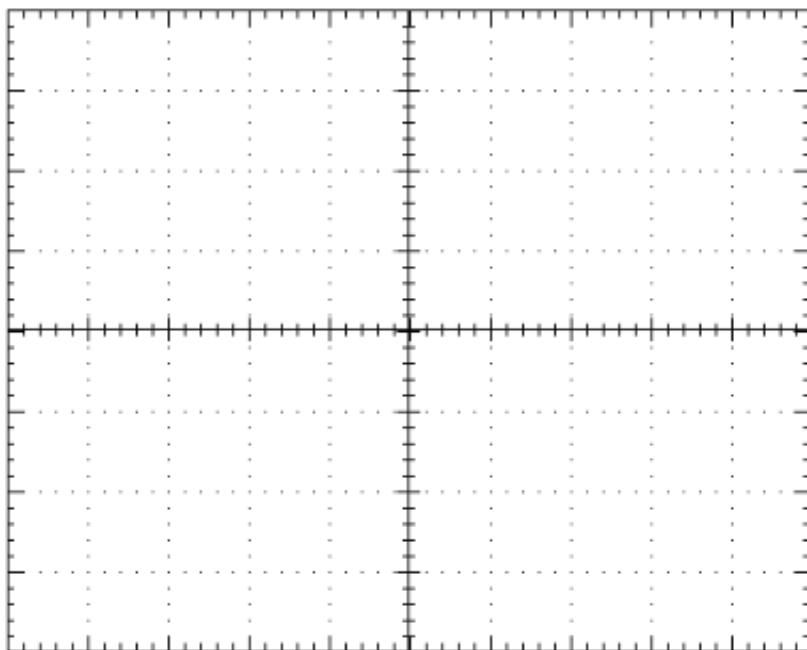
(d) $\alpha =$ Approximately 0° and 30° between R – L Output waveforms



(e) $\alpha = 45^\circ$ R – L *Output waveforms*



(f) $\alpha = 90^\circ$ R – L *Output waveforms*



(g) $\alpha = 120^\circ - 135^\circ$ R – L *Output waveforms*

Table 2. Simulation results for inductive loaded reverse parallel connected thyristors

α	$V_o(TRMS)$	$I_o(TRMS)$	$P_o(RMS)$	$P_o(Average)$
0°				
45°				
90°				
135°				

- Interpret the results obtained.