Included Content

Linac Operation Theory Textbook

Chapter 6: Beam Dosimetry & PRF

-Ion Chambers in Medical Linacs
-Ion chamber current collection
-Linac Calibration
-Dose Rate Control
-Dose rate servo

Chapter 7: Klystrons

-Microwave power sources for medical linear accelerators
-Klystron overview
-Description of the klystron's mode of operation
-Bunching process
-Klystron saturation
-Klystron Modelling
-Magnetic focusing
-Klystron construction

Chapter 8: Magnetrons

-Mode of Oscillation
-Magnetron anode and RF
-Resonant modes
-Mode separation
-Magnetron cathode
-Bunch formation in rotational motion
-Output coupler and frequency tuning
-Magnetron operating values

Chapter 9: Modulators

-Resonant Charging
-Pulse Forming Network (PFN)
-Thyratron switch
-PFN Discharge
-Pulse transformer
-Pulse noise

Chapter 10: Waveforms

-Pulse timing in a medical linear accelerator
-Pulsed nature of the linear accelerator
-Relationship between gun injection, reflected RF power, and beam output

Physics Quality Assurance Textbook