## **CONTENTS**

		Page
	Introductory Remarks	3
I.	VISCOSITY CHARACTERISTICS OF LUBRICANTS	
	Effect to Temperature on Viscosity	6
	Effect of Pressure on Viscosity	11
	Effect of Rate of Shear on Viscosity	17
II.	SENSITIVITY TO VISCOSITY UNDER OPERATING CONDITIONS	
	Introductory Remarks	24
	The Sensitivity of Equipment to Variation in Lubricant Viscosity	25
	Sensitivity of Machines to Lubricant Viscosity	33
	Lubrication of Roll Neck Bearings and Gear Drives in Continuous Rolling Mills	36
	Effect of Viscosity on Hydraulic Systems	48
III.	DESIGN CRITERIA FOR SELECTING VISCOSITY	
	Viscosity and Related Problems in Engine Design	53
	Selecting Lubricant Viscosity for Design of Helical and Worm Gears	61
	Viscosity in the Lubrication Mechanisms of Rolling Element Bearings	64
IV.	RESEARCH CONTRIBUTIONS TO APPLIED LUBRICATION	
	Gear Lubrication and Viscosity	75
	Recent Research and Development Work in Rolling Bearings	85
	The Effect of Temperature and Pressure on Viscosity as Related to	
	Hydrodynamic Lubrication	105
	Author Index	108