

# CONTENTS

<b>Preface</b>	3
<b>1. Introduction</b>	4
1.1 Classification of Heavy Guns	4
1.2 Short History of Ordnance Technique	7
<b>2. Gun Barrels</b>	11
2.1 Regions of the Barrel	11
2.2 Types of Gun Barrels	12
2.3 Load on the Gun Tube During Firing	15
2.4 Internal Arrangement of Gun Tube	22
2.5 Determination of Barrel Wall Thickness	25
2.6 Heat Transfer and Thermal Stresses in the Barrel	32
2.7 Barrel Devices	35
2.8 Barrel Wear and Barrel Life	38
<b>3. Breeches</b>	40
3.1 Breech Rings	40
3.2 Obturation	44
3.3 Types of Breech Mechanisms	46
3.4 Case Ejectors	60
3.5 Firing, Trigger and Safety Mechanisms	62
<b>4. Recoil mechanisms</b>	63
4.1 Force of Shot	70
4.2 Impulse of Force of Shot	75
4.3 Recoil and Counter-Recoil	77
4.4 Recuperators and Hydraulic Brakes	86
<b>References</b>	105