

# CONTENTS

	<b>Page</b>
Foreword	iii
Background	1
1.0 Introduction	3
2.0 Need for Remaining Life Assessment (RLA)	3
3.0 Various Damage Mechanisms Affecting the Age of the Plant	3
4.0 Factors affecting the Design life of Components	6
5.0 Non-destructive Tests (NDT) for RLA	8
6.0 Sampling and Laboratory Analysis (Destructive Test)	10
7.0 RLA of Boiler	11
8.0 RLA of Turbine	11
9.0 RLA of Generator	12
10.0 RLA on Power Transformer	15
11.0 Testing Facilities available for RLA with various Institutions Research Laboratories/Organisations	16
12.0 Methodology of RLA	21
13.0 Details of RLA Studies Carried out on Thermal Units in the Country	25
14.0 Details of Life Extension Programme under Implementation	25
15.0 Potential of RLA and LEP during Ninth Plan Period	25
16.0 Case studies	25
17.0 Development of Data bank for RLA of New Units	25
<b>ANNEXURES</b>	
Annexure-I	32
Annexure-II	35
Annexure-III	36
Annexure-IV	39
Annexure-V	40
Annexure-VI	43
Annexure-VII	47
Annexure-VIII	49
Annexure-IX	52
<b>CONCLUSIONS</b>	56