

CONTENTS

1-1 Studies on the mechanism of AKD sizing	1
1-2 Retention of alkyl ketene dimer size in papermaking systems	7
1-3 The reactivity of alkenyl succinic anhydride : its pertinence to alkaline sizing	17
1-4 The solvolysis of amic acids	21
1-5 Alkaline papermaking and rosin size	31
2-1 Role of alum in alkaline papermaking	37
2-2 Alkaline papermaking and microbial activity	43
2-3 Fillers and fabric life in alkaline papermaking	47
2-4 Cationic starches ASA sizing systems	51
2-5 Criteria for choosing the primary filler component in an alkaline system	55
2-6 Natural ground CaCO <sub>3</sub> in alkaline and neutral papermaking : synthetic wire abrasion; CaCO <sub>3</sub> as copy paper filler	61
3-1 Optimizing an ASA sizing system for fine papers	73
3-2 The importance of proper retention aid selection in alkaline papermaking	79
3-3 Retention aids in alkaline papermaking	81
3-4 Alkaline printing and writing production using alkylketene dimer sizes	85
3-5 The role of retention in alkaline sizing systems	89
4-1 Corrosion considerations for alkaline papermaking	93
4-2 behavior of anionic direct dyes under alkaline sizing conditions	103
4-3 Neutral papermaking in unbleached kraft	109
4-4 The chemistry of the neutral / alkaline process	113
Conversion factors for SI units	135