CONTENTS

NOMENCLATURE	1
CHAPTER ONE: INTRODUCTION The Problem of Fluidised Bed Coating	5 5
The History and The Present State of Arts	6
Set-up of the Text	0 7
CHAPTER TWO: FLUIDISATION	9
The Uses of Fluidised Systems	9
Basic Definitions in Fluidised Systems	10
Mechanics of Fluidisation	11
Fluidised Bed-Packed Bed-Hydraulic/ Pneumatic Transport-Single Particle Hydrodynamic interactions	13
CHAPTER THREE: PARTICLE MOTION IN A FLUIDISED BED Introduction	23 23
Particle motion in the Bed	23 23
The Results and their Interpretations	23
Conclusions	26
CHAPTER FOUR : THERMAL PROPERTIES OF PARTICULATELY FLUIDISED BEDS	27
Introduction	27
Factors Affecting the Mechanism of Coating	27
Experimental Apparatus and Procedure	29
Interpretation of Results	32
Conclusions	39
CHAPTER FIVE: THE MECHANISM OF THE COATING PROCESS	41
Introduction	41
Experimental Set-up and Procedure	41
Experimental Results and Their Interpretations for Polymers with Negligible Heat of	42
Fusion (Polystyrene) Experimental Results and Their Interpretations for Polymers with Heat of	42
Fusion (Polyethylene)	51
The General Theory of Fluidised Bed Coating	56
Conclusions	73
Appendix	74
CHAPTER SIX: COATING OF CONTINUOUSLY MOVING AXIALLY	
SYMMETRIC OBJECTS	77
Introduction	77
Experimental Apparatus and Procedure	77
Theoretical Predictions and the Experimental Results for the coating Thickness on a	
Continuously Moving Wire	78
Conclusions	81
CHAPTER SEVEN : SOME PRACTICAL CONSIDERATIONS AND CONCLUSIONS	83
Introduction Dest Heating of the Coating	83
Post Heating of the Coating Considerations of Optimum Conditions of Coating Operations	83 85
Conclusions	88
REFERENCES	91
	1