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4.5.3. B-B-T Sequence Campaign for all the Stages -- 4.6. CONCLUSIONS AND OUTLOOK ON THE PROPOSED HEURISTIC APPROACH FOR MIXED PRODUCT CAMPAIGN MODEL -- PROCESS INTEGRATION:MATHEMATICAL MODELING FOR THE OPTIMAL SYNTHESIS, DESIGN, OPERATION AND PLANNING OF A MULTIPLANT COMPLEX -- 5.1. INTRODUCTION -- 5.2. MODEL FORMULATION -- 5.3. MULTIPLANT COMPLEX TO PRODUCE DERIVATIVES FROM SUGAR CANE -- 5.4. RESULTS AND ANALYSIS -- EXAMPLE -- 5.5. CONCLUSIONS AND OUTLOOK ON THE PROPOSED MULTIPLANT INTEGRATION MODEL. GENERAL SUMMARY AND SUGGESTIONS FOR FURTHER READING -- REFERENCES -- INDEX.

Sommario/riassunto

Mathematical modelling is a powerful tool for solving optimisation problems in chemical engineering. In this work several models are proposed aimed at helping to make decisions about different aspects of the processes lifecycle, from the synthesis and design steps up to the operation and scheduling. Using an example of the Sugar Cane industry, several models are formulated and solved in order to assess the trade-offs involved in optimisation decisions. Thus, the power and versatility of mathematical modelling in the area of chemical processes optimisation is analysed and evaluated.