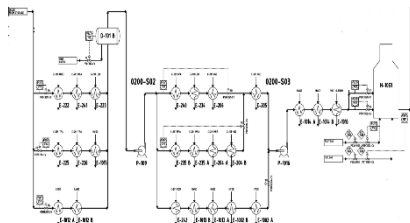


Introduction

Since the necessity of energy-intensive products is more than basic and renewable projects are not economically viable for all industries, the interest should be turned into process integration methods to relieve the planet from the heavy atmosphere.

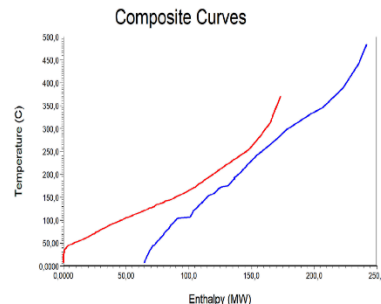
The purpose of this study is to decrease the energy consumption and CO₂ emissions of Kalundborg refinery by proposing retrofit solutions using the Pinch Technology.



Methodology

Pinch study in Block 1 following :

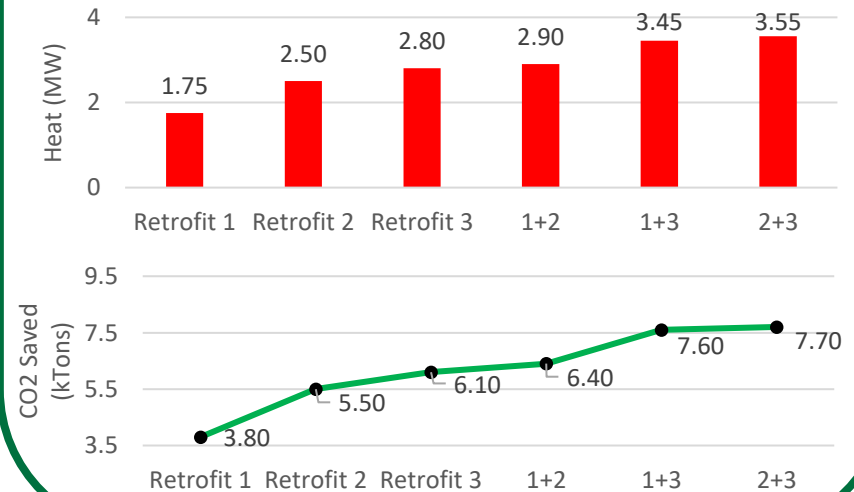
- Data extraction and reconciliation
- Set of energy targets and pinch point
- Design of composite curves
- Retrofit suggestions
- Technical feasibility using Pro II simulations



Results

6 retrofit suggestions:

- 3 individual scenarios
- 3 combinations of the individual scenarios



Perspectives

- Further study for the waste heat by coolers.
- Use of mathematical programming instead of heuristics.