

PROCESS INTEGRATION

Part 2: Total Site Analysis

Introduction to Total Site Analysis

by

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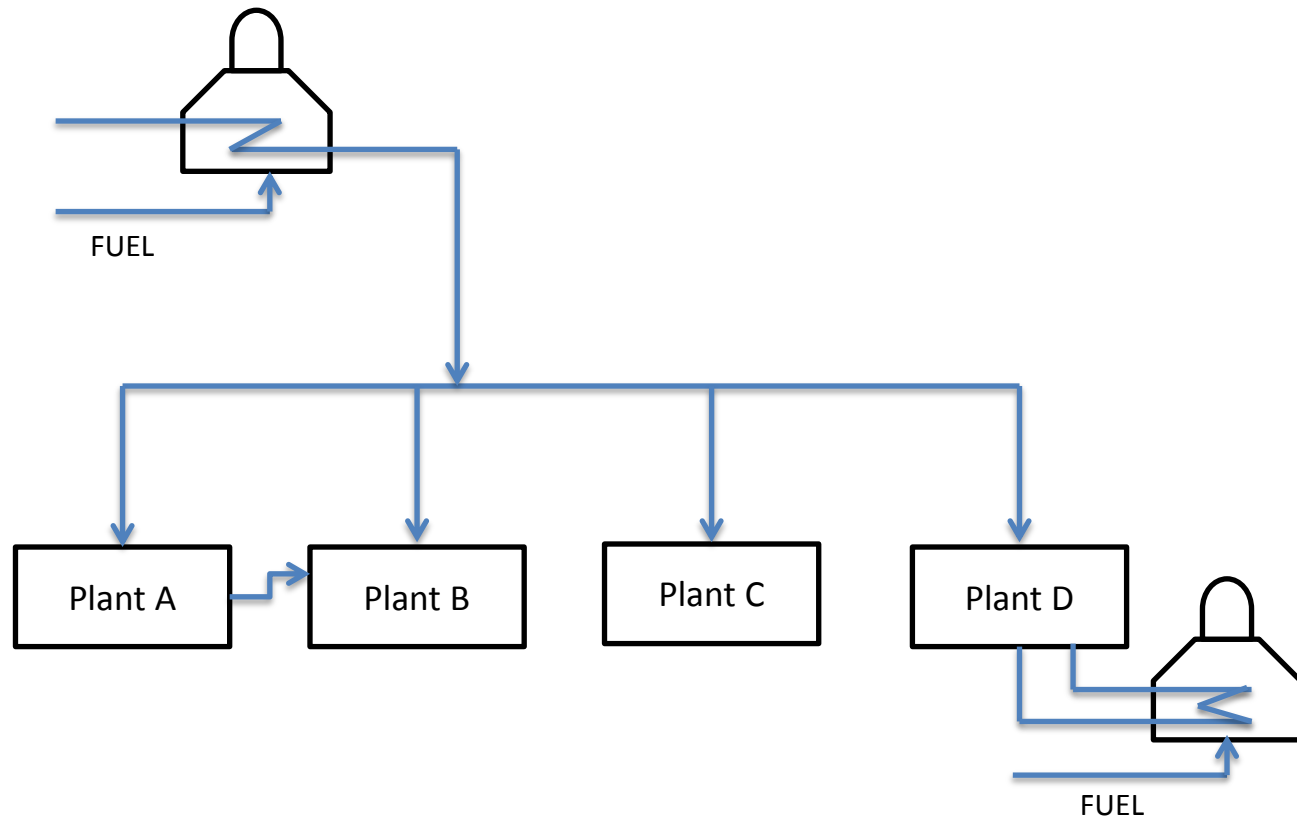
Chapter Description

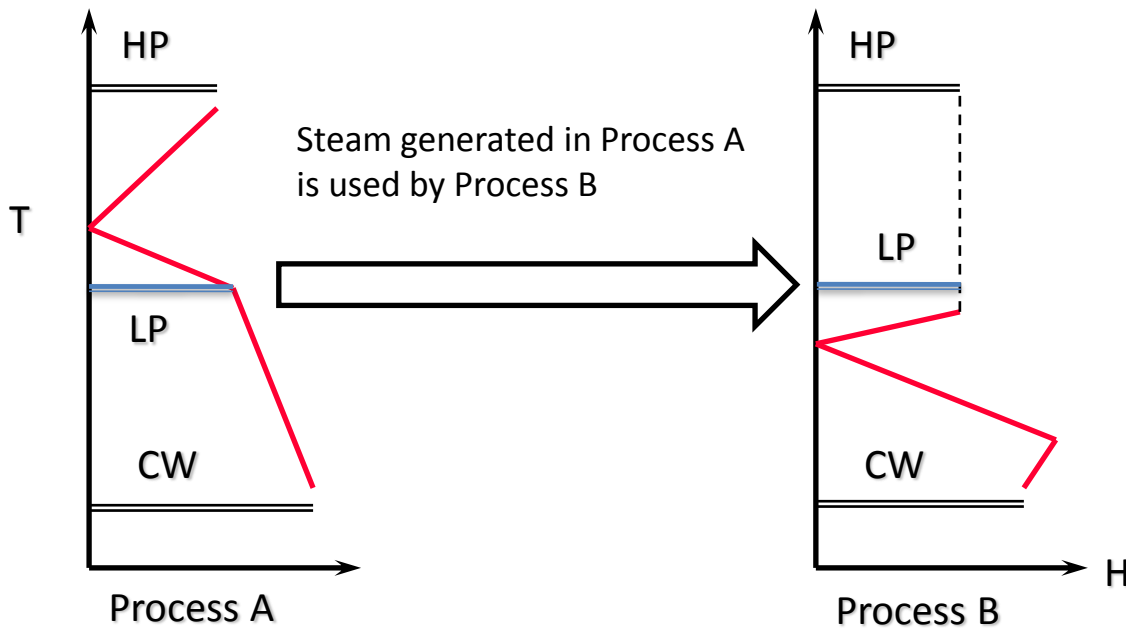
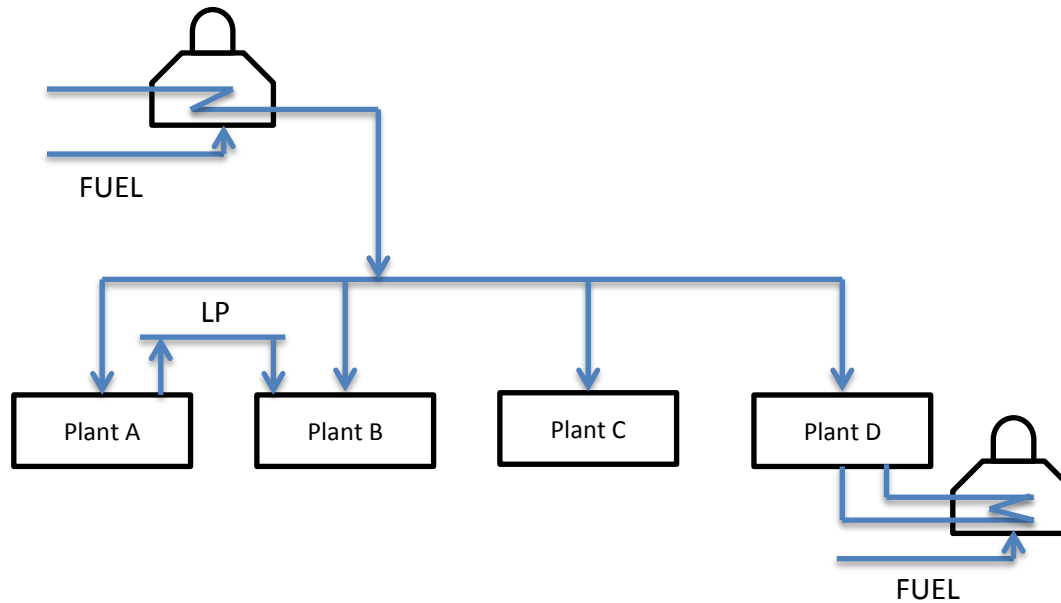
- **Aims**
 - To understand the basic integration of overall utilities (power, heat, steam, etc) for multiple plants
- **Expected Outcomes**
 - Students are able to explain the basic concept of integrating utilities in multiple plants



In this lecture we will learn how to estimate integration of utilities system in an industrial area

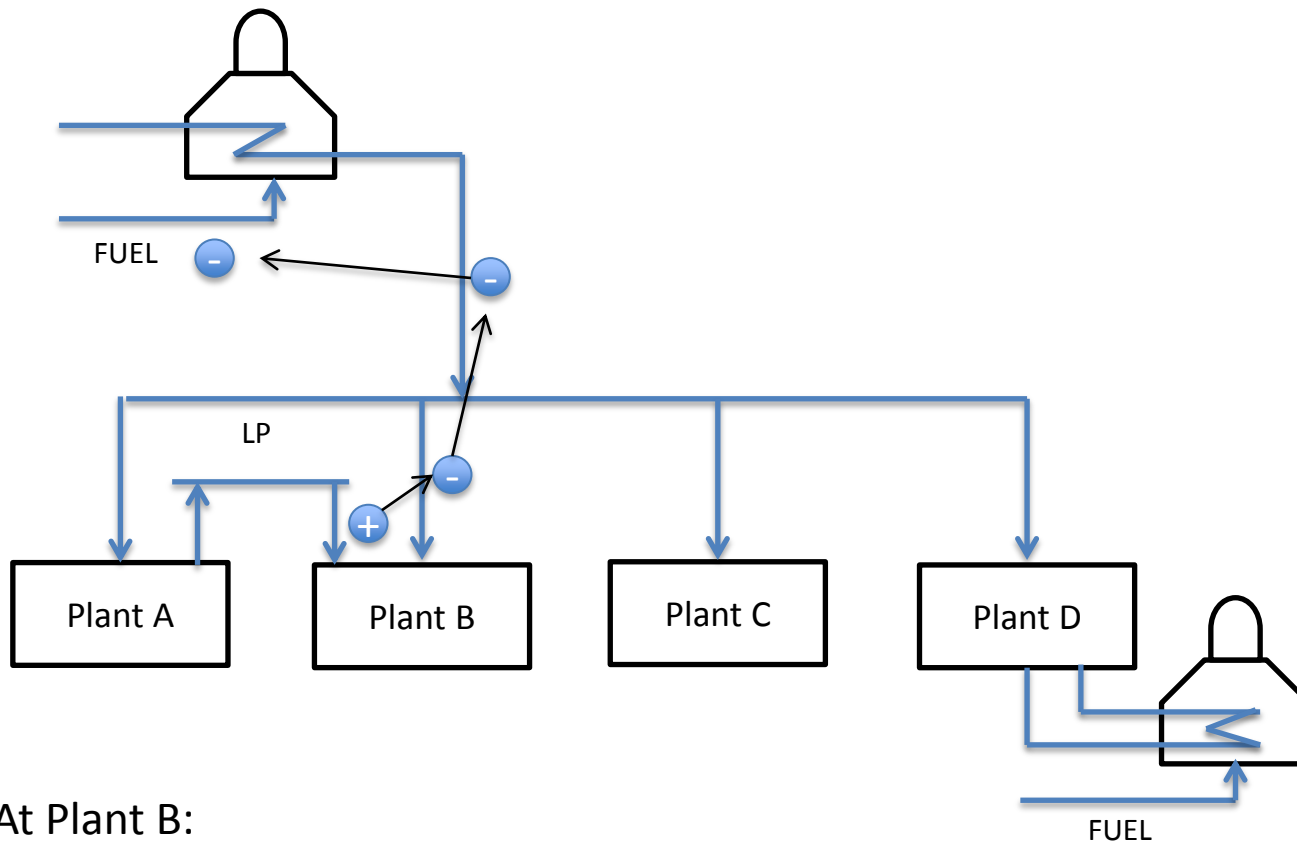






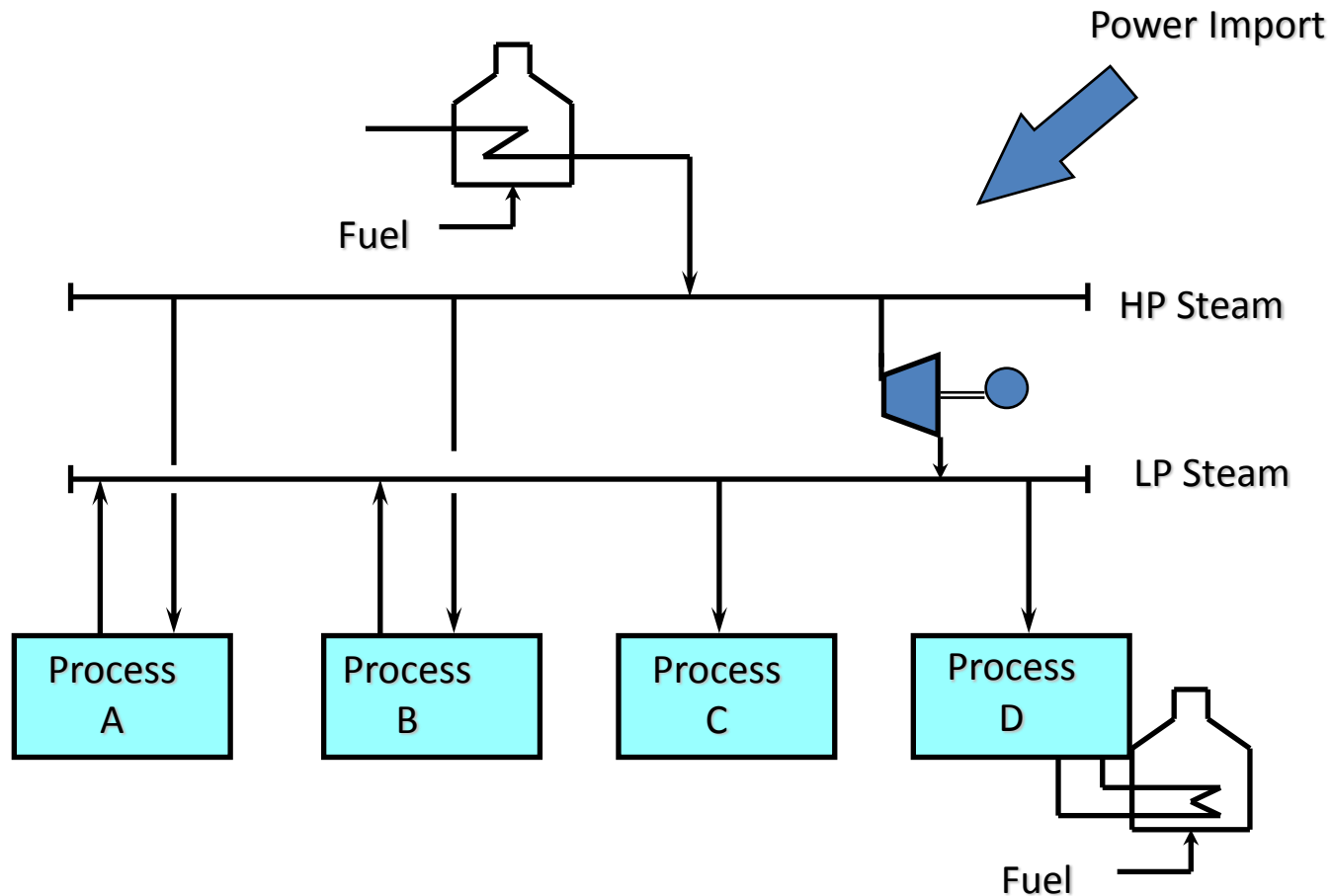
By total site analysis,
the use of HP steam
can be reduced or even
replaced by LP steam.

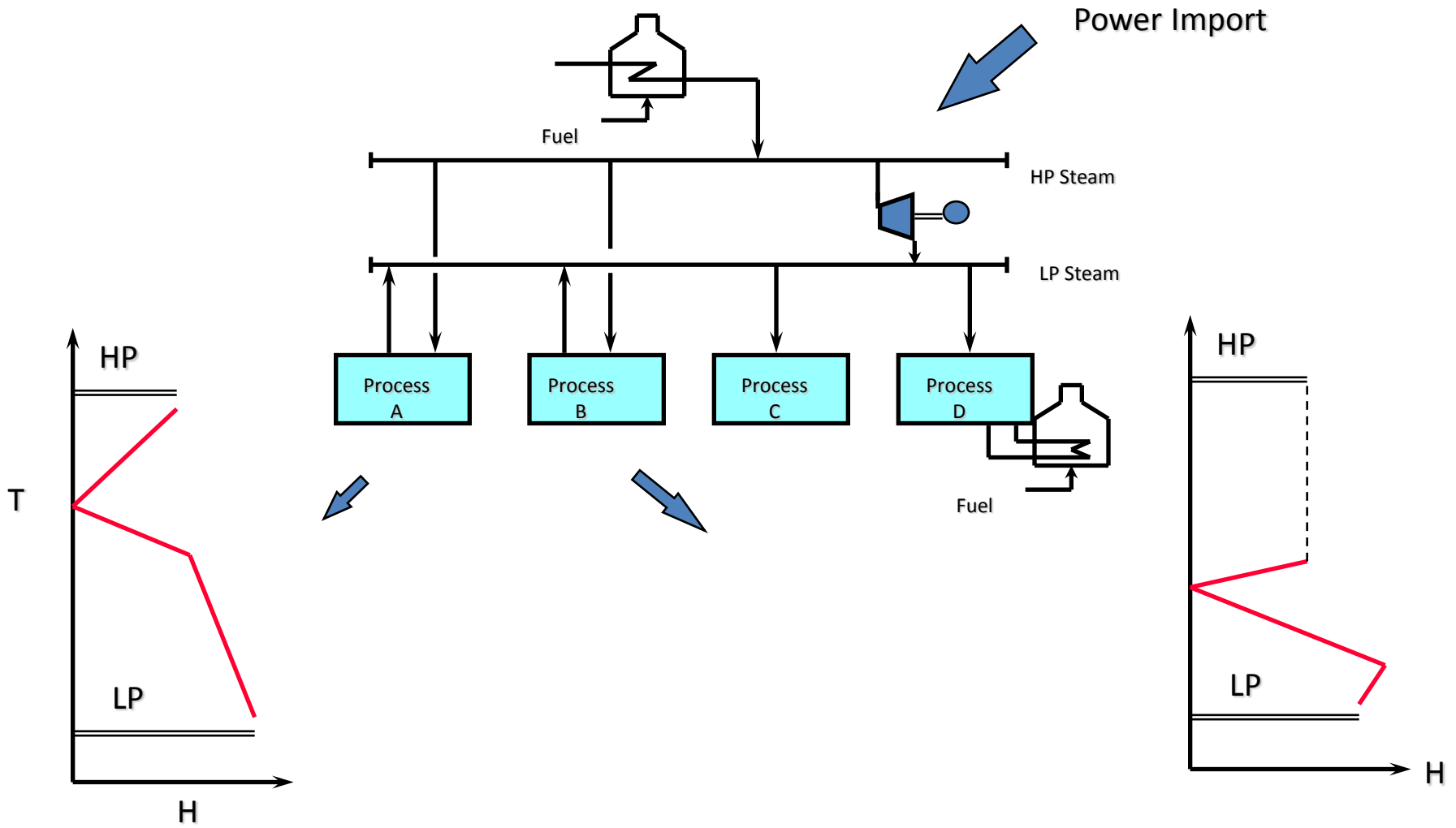




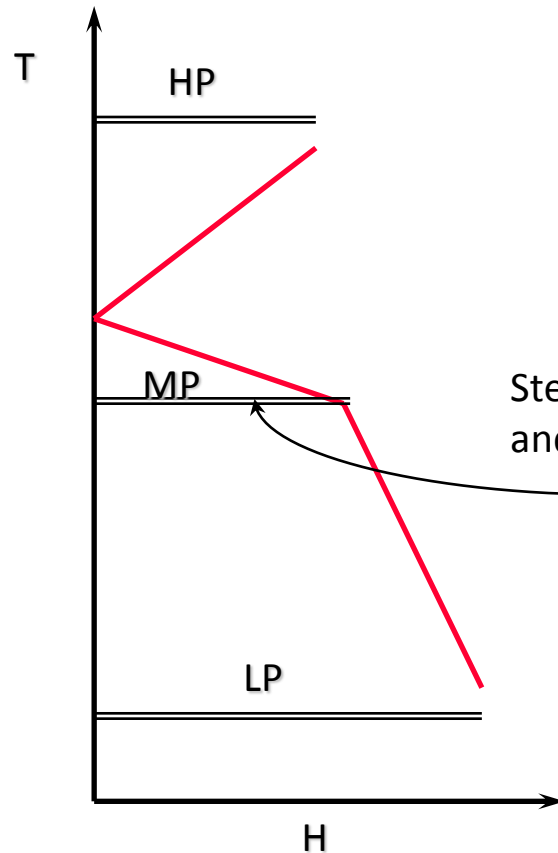
At Plant B:
Additional LP steam from Plant A will reduce steam consumption from reboiler; hence fuel consumption can also be reduced.

More complex steam system





Process A

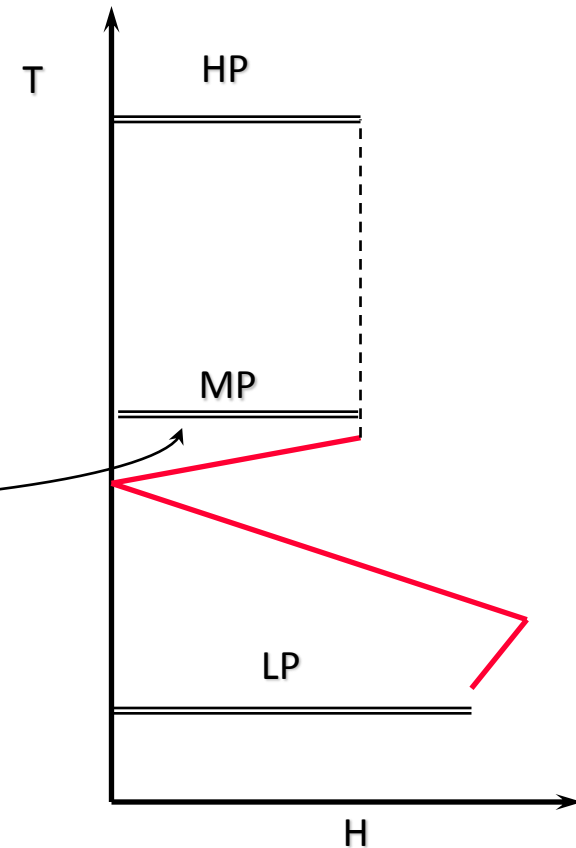


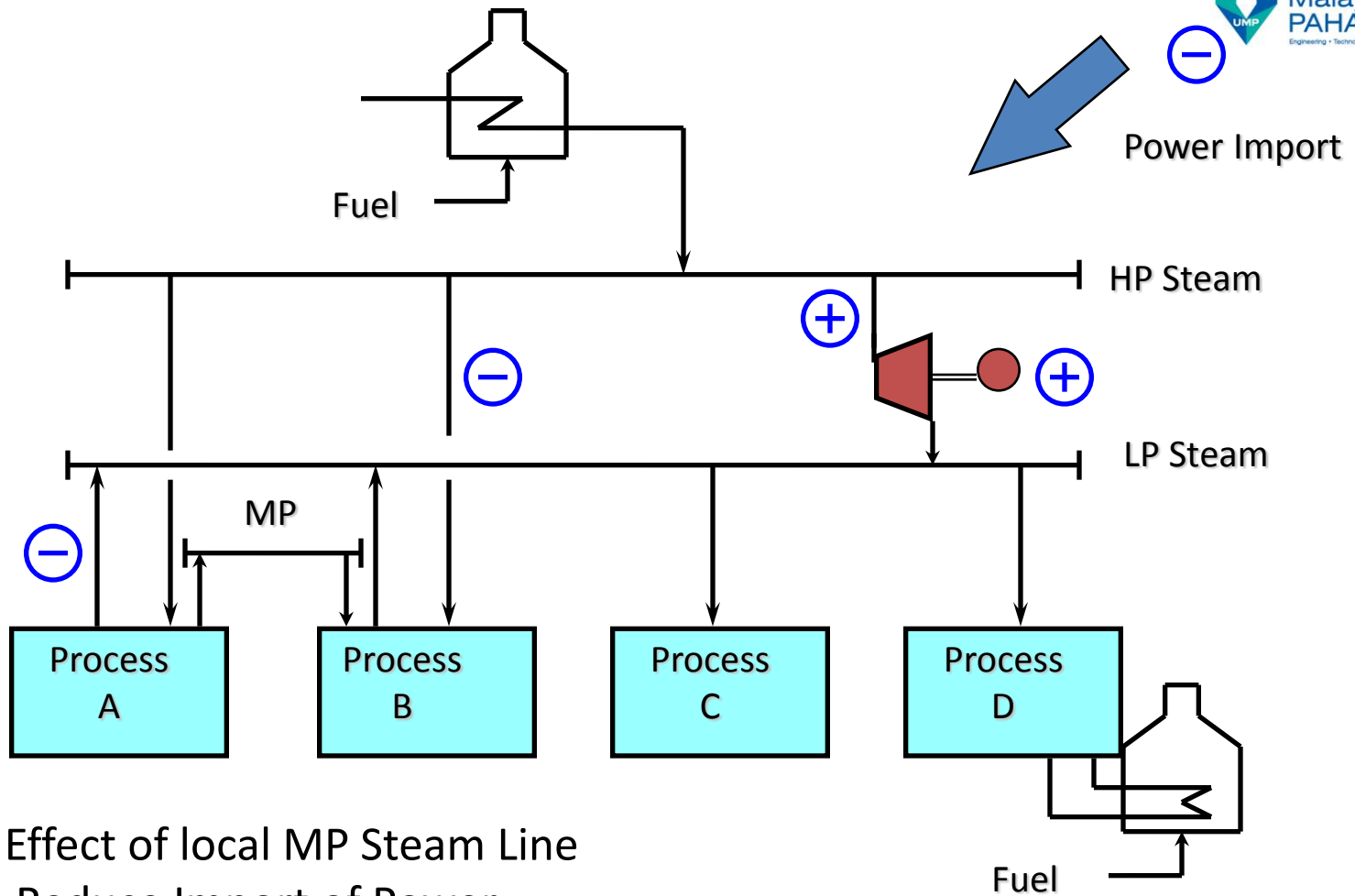
Steam generated in A
and re-used in B

No change in steam
flowrates or specific
steam consumption.

Effect is less
HP consumed but
less LP generated

Process B





Net Effect of local MP Steam Line
is to Reduce Import of Power

Thank you

