Scheduling in Continuous Process Industry: Models and Solution Procedures

Supervisor: Subir Bhattacharya

The thesis deals with a class of scheduling problem that occurs quite frequently in [illegible]

[illegible]

[illegible] trade-off between storage and changeover costs in processing multiple products on the same process line. Solution [illegible] these blocked-out units are cascaded one after the other – separated by fixed [illegible]

[illegible] by t[illegible]

[illegible] stretches durin[illegible]

the schedu[illegible]g horizo[illegible] interleaved with the [illegible]ssing of other stream[illegible] The length of a

stretch is r[illegible]ed and each such stretch is called *run-length*. It mus[illegible] [illegible]ed however,

that the length of [illegible]h stretch of run should be greater than a [illegible]

[illegible] long stretches of run are des[illegible]

[illegible] optimal mix of product segme[illegible]

[illegible]athematical model

based on the concept of 'state task network' t[illegible]

[illegible]

[illegible]hematical model for [illegible] problem. Towards

[illegible]

[illegible] variables on the d[illegible]s of upliftments.

[illegible]ristic

bound mechanism. Here we develop heuristic strategies for upliftment failure and spillage penalties. We also develop efficient node ordering strategies in order to