Materials Processing Institute

CASE STUDY

Development of a Discrete Event Simulation Model for Recycling Process Scenarios

THE PROJECT

The Materials Processing Institute was asked to carry out Discrete Event Simulation modelling of two different operating scenarios for Recycling and Recovery Processes using the Rockwell Arena Software.

The requirement was to establish what numbers of mobile equipment would be required to manage identical loads for each scenario. The first scenario ran a smaller plant under a continuous operation, while the second scenario ran a somewhat larger plant under a reduced number of shifts.

The Institute applied Discrete Event Simulation Modelling techniques to consider the recycling and recovery processes at both plants operating to these scenarios.

To achieve this the Institute:

> Mapped out the process route of the areas to be modelled at each plant
> Built a discrete event simulation model of the process routes
> Applied the operating data for the two scenarios in the finished model

THE OUTCOME

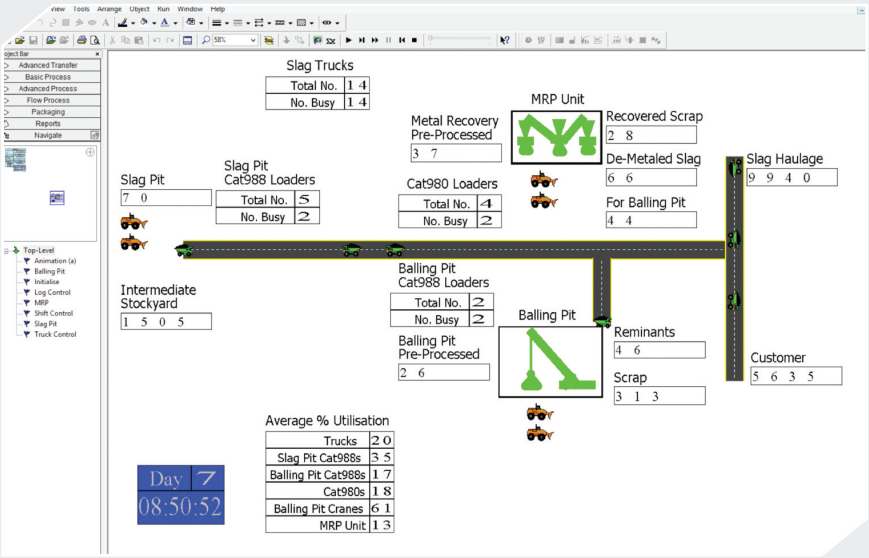
Several modelling runs for both plants were carried out using the discrete event simulation model.

This simulation model identified:

> Equipment required to process the materials for each scenario

Resulting in:

> The client being able to more accurately cost the two different operating scenarios



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