

Maintenance framework to address the interaction of components using simulation



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Anglo American plc is a multinational mining company headquartered in London, United Kingdom. It is the world's largest producer of platinum, with around 40% of world output, and a major producer of diamonds, copper, nickel, iron ore and metallurgical and thermal coal. It has operations in Africa, Asia, Australasia, Europe, North America and South America.

Simulation technique is used in the maintenance management of a complex system. The model considers the most important interaction between the components in a production chain: the lack of material feed and the blockage states. Both occur as a result of corrective maintenance (generated randomly) and preventive maintenance (scheduled) activities. The purpose of the model is to provide the visibility of the system, measuring performance in terms of productivity, identifying bottlenecks generated by the maintenance schedule and identifying policies which deliver the best production rate and higher service level.

Simulation and Forecasting Technology role

Maintenance management of a complex system, identification of bottlenecks

Sector

Metals

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The collage includes:

- Document Cover:** Titled "MAINTENANCE FRAMEWORK TO ADDRESS THE INTERACTION OF COMPONENTS USING SIMULATION". Authors listed include Luiz Augusto G. Franzese, Daniel de Oliveira Metz, Marcelo Moreira Foroni, Yuri Amarel C. L. Mourão, Douglas José da Silva, and Johanna Gomes Queiroz. It also lists Anglo American - IOB Business Unit.
- Abstract:** Discusses maintenance as a constant concern in industries and the use of simulation to address it. It mentions the application of Arena Professional.
- Process Flow Diagram:** A schematic diagram showing the flow of material through various stages like "GRANULADO", "ROLER PRESS", and "CONCENTRACION".
- Figure 5:** A 3D model snapshot of the production system.