

APPLICATION OF SIMULATION IN METALLURGY SUPPLY CHAIN OPTIMIZATION

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This article focuses on combination of the Value Stream Mapping and computer simulation within metallurgy supply chain optimization. The authors' aim is to build up a conceptual model and verify it so that impacts of supply chain optimization by means of lean concept could be properly identified. Production process planning and management in metallurgy is characterized by high size batches due to technologically-economic reasons. However, high size production batches could hardly correspond with current customer requirements as customers wish to avoid holding a high level stock of incoming material in their warehouses and on their expenses. Searching for optimal parametrization of an interface between supplier production and distribution process and customer requirements is an inevitable task today for companies out of the metallurgical sector. Thus, Value Stream mapping and computer simulation can enable identification of real opportunities for time and cost reduction in a supply chain and refuse insular solution that can only increase effectiveness and efficiency of one company to the detriment of other supply chain elements.

Keywords: Value Stream Map, simulation, stock, lean, metallurgy

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