

# Model integrasi value engineering (VE)-Lean six sigma (LSS) dalam program manajemen biaya pada proses steelmaking = Integration model of value engineering (VE)-Lean six sigma (LSS) for cost management program in steelmaking process / Widia Kurnia Adi

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## Abstrak

### **ABSTRAK**

Tiga karakteristik penting pada suatu produk agar dapat bertahan dan diterima oleh pelanggan adalah kualitas, fungsionalitas dan biaya, yang disebut Survival Triplet. Pada produk baja, karakteristik fungsionalitas dan kualitas telah ditentukan oleh standar sehingga hanya tersisa karakteristik biaya yang harus diatur sebaik mungkin. Penerapan Lean Six Sigma LSS dan Value Engineering VE memberikan efek penurunan biaya dengan pendekatan yang berbeda. Penelitian ini bertujuan untuk menguji kesesuaian respon model integrasi VE-LSS terhadap penerapan Lean, Six Sigma dan VE pada proses steelmaking. Model integrasi antara VE dan LSS dibuat dengan memodifikasi konsep VE Value = Function/Cost. Integrasi LSS kedalam kerangka VE akan meningkatkan efisiensi penggunaan sumber daya yang berujung pada biaya Cost yang lebih rendah dengan tetap mempertahankan karakteristik fungsionalitas dan kualitas produk. Hasil analisa menunjukkan penerapan VE-LSS secara bersamaan meningkatkan efisiensi penggunaan sumber daya pada proses steelmaking sehingga diperoleh biaya yang lebih rendah. Hasil tersebut sesuai dengan model integrasi VE-LSS yang telah dibuat.

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There are three main characteristics the product to be survived and accepted by customers which are functionality and quality which is internally associated with cost and externally with price, the cost so called Survival Triplet. In the case of steel products, functionality and quality of product are specified in the product standard. Hence, cost is the only remaining characteristic that should be well managed. The implementation of Lean, Six Sigma LSS and Value Engineering VE by different approaches lead to cost reduction. The objective of the study is to test response suitability of integration model of VE LSS according to implementation of Lean, Six Sigma and VE in the steelmaking process. Integration model between VE and LSS developed by modify original VE concept Value Function Cost. Integration of LSS in the VE framework enhanced resource consumption efficiency that lead to lower Cost while maintaining functionality and quality characteristic of products. The analysis showed the implementation of VE LSS simultaneously increased the efficiency of resource in the steelmaking process that lead to lower cost. These results were in conformity with the constructed integration model of VE LSS.