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DESIGN AND OPTIMISATION OF ROLLER CONVEYOR SYSTEM

Venkata Reddy Sangana ⁽¹⁾ Salman Pattan ⁽²⁾ Sai Charan V ⁽³⁾ Amarnadh M ⁽⁴⁾ Bharath P ⁽⁵⁾

⁽¹⁾ Faculty of Mechanical Engineering, K L (Deemed to be University), Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India.

⁽²⁾ UG Scholar, Department of Mechanical Engineering, K L (Deemed to be University), Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India.

⁽³⁾ UG Scholar, Department of Mechanical Engineering, K L (Deemed to be University), Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India.

⁽⁴⁾ UG Scholar, Department of Mechanical Engineering, K L (Deemed to be University), Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India.

⁽⁵⁾ UG Scholar, Department of Mechanical Engineering, K L (Deemed to be University), Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India.

Abstract

Now-a-days the industry demands Cost/Weight effective devices to perform the operation effectively without sacrificing the longevity of the devices. The main aim of this paper is Optimized design of critical elements of existed Gravity Roller Conveyor System such as Roller, C-Channels to reduce the weight of the assembly and to have cost reduction. The Geometrical and finite element modelling of existed and proposed design is made by using the CATIA V5R17 and ANSYS 17. Results show the optimized design is safe for given same loading conditions with huge amount of weight reduction. In this analysis we were replaced the existed low carbon mild steel with Aluminium. In the roller conveyor system, we are taken two materials which is low carbon mild steel and aluminium.

Author Keywords

Optimised design, weight reduction, cost reduction, optimised technique and material handling technique.

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