

ABSTRACTS

ABSTRACTS

doi:10.22306/am.v7i1.82

Received: 03 Feb. 2022 Revised: 18 Feb. 2022 Accepted: 02 Mar. 2022

Kinematic motion analysis of the members of a double jaw crusher

(pages 1-7)

Darina Hroncova

Department of Mechatronics, Faculty of Mechanical Engineering, Technical University of Košice, Park Komenského 8, 042 00 Košice, Slovak Republic, EU, darina.hroncova@tuke.sk (corresponding author)

Ingrid Delyova

Department of Applied Mechanics and Mechanical Engineering, Faculty of Mechanical Engineering, Technical University of Košice, Letná 9, 042 00 Košice, Slovak Republic, EU, ingrid.delyova@tuke.sk

Peter Frankovsky

Department of Applied Mechanics and Mechanical Engineering, Faculty of Mechanical Engineering, Technical University of Košice, Letná 9, 042 00 Košice, Slovak Republic, EU, peter.frankovsky@tuke.sk

Vojtech Neumann

Department of Applied Mechanics and Mechanical Engineering, Faculty of Mechanical Engineering, Technical University of Košice, Letná 9, 042 00 Košice, 042 00 Košice, Slovak Republic, EU, peter.frankovsky@tuke.sk

Dalibor Cech

Department of Applied Mechanics and Mechanical Engineering, Faculty of Mechanical Engineering, Technical University of Košice, Park Komenského 8, 042 00 Košice, Slovak Republic, EU, dalibor.cech@tuke.sk

Keywords: kinematic analysis, mechanism, simultaneous motion, simulation.

Abstract: Computational technology makes it possible to accelerate and simplify the processes of kinematic and dynamic analysis. The paper deals with the problem of kinematic analysis of a planar six-joint mechanism of a jaw double-spring crusher. Computational techniques and software support have been used in the kinematic analysis. The obtained results are compared with the results of the graphical solution. The graphical solution has been carried out by using CAD software. MSC.Adams/View program was used to create a model and simulate the jaw crusher motion. In both cases there was agreement of the obtained results.

doi:10.22306/am.v7i1.84

Received: 05 Feb. 2022 Revised: 17 Feb. 2022 Accepted: 07 Mar. 2022

Pick & Place automated workplace based on CC-Link IE Field basic communication

(pages 9-12)

Jaroslav Romancik

Technical University of Kosice, Faculty of Mechanical Engineering, Letna 1/9, Kosice, Slovak Republic, EU, jaroslav.romancik@tuke.sk (corresponding author)

Marek Vagas

Technical University of Kosice, Faculty of Mechanical Engineering, Letna 1/9, Kosice, Slovak Republic, EU,

marek.vagas@tuke.sk Alena Galajdova

Technical University of Kosice, Faculty of Mechanical Engineering, Letna 1/9, Kosice, Slovak Republic, EU, alena.galajdova@tuke.sk

Keywords: collaborative robot, PLC, camera sensor, communication.

Copyright © Acta Mechatronica, www.actamechatronica.eu



ABSTRACTS

Abstract: The article offers a proposal for communication between the collaborative robotic system and the PLC control concerning the CC-LINK IE FIELD BASIC communication protocol. The solution tests the principle of "Master" and "Slave," where the preferred system is the PLC (from the product company Mitsubishi). In general, there are many possibilities for communication, so this article orients toward Ethernet-type communication. It also includes an innovative interconnection of the components of the different manufacturers (Mitsubishi, VENGLOR, and others) and verification on a real application example of the type "Pick & Place."