

Design and simulation of a pneumatic control system for the metal cutting stage using Automation Studio and Tia Portal software.

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Abstract: This topic aims to design and simulate a control system to improve the efficiency of the metal cutting process through the application of the software tools Automation Studio and Tia Portal. The objective is to build a practical technical solution that meets high requirements for precision and automation in production. The research method combines theory with experimentation to ensure the system's effectiveness. Expected results include reducing labor costs, improving product quality, and optimizing the production process.

Keywords: control system, Automation Studio, TIA Portal, metal cutting, automation