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Industry 4.0 and Hyper-Customized Smart Manufacturing Supply Chains

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Chapter 10

Evaluation of Influence of Principles Involved in Industry 4.0 Over Coal Industries Using TISM

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Abstract:

Coal is the major source of energy in the world. But, the process of extraction and use of coal has adverse effects on the environment. In this chapter, the authors try to reduce these effects by considering the principles and technologies involved in Industry 4.0, also known as the Fourth Industrial Revolution. From a few expert reviews and research works, eight crucial factors were taken into account and were analyzed. The eight factors are consumer, water resources, smart transportation, smart factory, smart grid, smart mining, smart home, and renewable energy. The analysis has been made using the Total Interpretive Structural Modeling (TISM) method. The model distinctly demonstrates the influence of the principles of Industry 4.0 over coal industries. This chapter also aims to pave the way for future research and tries to contribute towards the sustainable extraction and usage of coal in energy industries. Consumer plays the most influential role in this regard.

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