

OPTION2

Research on the Redeveloping of Nuclear Power Plant Construction Management System in South Korea

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Abstract: Since the commercial operation of Kori Unit 1 in 1978, South Korea has been at the forefront of nuclear power plant construction for nearly 40 years. South Korea have constructed 27 nuclear power plants domestically and an additional 4 plants in the UAE. Leveraging this extensive experience, the country has developed and operated a nuclear power plant construction management system with a focus on procedures and processes development, along with a user-friendly approach. The initial nuclear power plant construction management system operated was NPCS (Nuclear Power Plant Construction System), which was based on drawing inquiries. Subsequently, a system centered on construction project management, known as NPCMS (Nuclear Power Plant Construction Management System), was established and operated.

In 2009, through the export of nuclear power plant construction to the UAE, research on advancing construction management led to the implementation of INPCMS(Integrated Nuclear Power Construction Management System), which is functionally enhanced. Over time, in response to changes in the construction environment, demands from international operators, and alignment with global standards, South Korea is in the process of redeveloping its INPCMS. This aims to establish a global nuclear power plant construction management system, outlining key features and future directions.

Key words: Nuclear Power Plant Construction, Construction Management, NPP Construction Management System