

Coordination of FPSO and Tanker Offloading Operations

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Abstract

There is no argument that the effects of control and automation technology on the marine transportation industry have been great. Since the invention of the first autopilot by Sperry early in the last century, we have seen the invention, innovation and improvement in new control technology, culminating in today's heavily automated vessels. Control and automation technologies, specifically Dynamic Positioning (DP), have benefited the industry by enabling vessels to do things that would not have otherwise been possible using manual methods.

This paper looks at the application of intelligent or knowledge-based control (IC or KBC) technology to the control of marine vessels. The next section gives the motivation behind IC and how it differs from classical control systems theory. The following section discusses how marine vessel control can benefit from the application of IC, with the example of an FPSO and an offloading tanker operation. Finally, the current progress with regards to the proving of this concept using model testing and simulation is given.

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