Research on corrosion and protection technology in purification process of LNG liquefaction plant

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Abstract As an important place for the production, storage and transportation of LNG, LNG liquefaction plant has a series of strict treatment methods and technological processes. In order to ensure the effect and quality of natural gas liquefaction, it is necessary to remove impurities such as CO2, Hg and H2S and free water in the purification process. In this regard, effective anti-corrosion measures and scientific management methods can improve the purification effect of natural gas. The results show that: (1) the degree of corrosion has a great impact on the safety performance of the equipment pipeline, especially the corrosion at the elbow is easy to cause natural gas leakage, and then cause accidents; (2) Changes in pressure, temperature and flow rate are also factors affecting corrosion in the purification process of LNG liquefaction plant; (3) Specific measures can be started from the analysis and treatment of corrosion sites and corrosion types of important devices; (4) The construction and training of professional skilled personnel is conducive to the research and development of corrosion science and anti-corrosion engineering. Through the above discussion, it is concluded that the upgrading and application of corrosion and protection technology can help the smooth and efficient operation of LNG liquefaction plants, extend the service life of equipment and facilities, and accelerate the construction of talent teams, thus promoting the high-quality development of LNG industry.

Keywords LNG liquefaction plant; Purification; Corrosion; Defense; Influencing factor

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