**Translation Part**

Abstract:

Corrosion perforation of air cooler on atmospheric tower in refinery is mainly caused by the outer wall pitting, and the leading factors which results in the air cooler failure are Cl-, PH , temperature and Na+. With orthogonal model design test program to the main factors, and through polarization curves experiments obtain the corresponding corrosion potential, corrosion rate, pitting potential. Analysis the change of Cl-, PH value, Temperature and Na+ to the air condenser corrosion influence. The results show that, Cl- concentration, Na+ concentration rise make air cooler on atmospheric tower happening corrosion easily; PH value rise make air cooler on atmospheric tower happening corrsion not easily, which has a protective effect to the passive film; Temperature rise make air cooler on atmospheric tower passivation membrane formation rate increase, and at the same time pitting corrosion is more easily to happen.

摘要：

精炼行业中常压塔的空气冷却器的腐蚀穿孔主要是由外壁的麻点腐蚀造成的，而造成空气冷却器失效的主要因素是氯离子、酸碱度、温度、和钠离子。用正交模型测试主要的影响因素，通过极化曲线实验获取对应的潜在腐蚀，腐蚀速率和麻点腐蚀。分析氯离子、PH值、温度和钠离子对空气压缩机的腐蚀影响。结果显示，氯离子的聚集、钠离子的富集会使得常压塔中的空气冷却器更易腐蚀。PH值的上升让常压塔中的空气冷却器不易发生腐蚀，对钝化膜起到保护作用；温度上升会使得常压塔中的空气冷却器的钝化膜生成速率上升，与此同时更容易发生麻点腐蚀。

**Writing Part**

**Article title:**

Player-centered game AI from a flow perspective: Towards a better understanding of past trends and future directions

**My abstract**

Player-centered approaches that aim to maximize player enjoyment have been steady, but with poor heuristics that do not rely on any particular theory of entertainment. Certainly, the Theory of Flow is the most referred in the game AI area and, still, it is unclear how to effectively design and implement adaptive game modules or understanding which game features drive players to a flow state. Therefore, in this document the author performs a systematic analysis of literature aimed to enhance our knowledge about how to adapt flow heuristics to a video game context. This analysis endows us with the knowledge needed to define a flow framework for game AI. The framework mentioned in the article, FlowAI, describes which modules and what gameplay features can be adapted to design an effective video game intended to

facilitate the achievement of flow in players. Furthermore, from the framework standpoint, the author identifies and reviews existing work that could be adjusted to foster flow. The author's aim with this analysis is to identify current challenges, and motivate new directions in the player-centered research area.