

# 硫酸储罐爆炸事故分析及预防

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Title: Analysis and prevention on explosion accident of sulfuric acid tanks

作者: 张启波; 袁凤丽; 王清  
青岛理工大学 汽车与交通学院, 黄岛 266520

Author(s): ZHANG Qi bo; YUAN Feng li; WANG Qing  
School of Automobile &Traffic, Qingdao Technological University, Huangdao 266520, China

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摘要: 介绍了山东省某化工有限公司苯胺厂的工人在废硫酸罐顶部焊接管线时发生的一起废硫酸罐爆炸事故。通过对事故发生经过及现场情况的调查分析, 找出了导致事故发生的原因, 由于废硫酸罐耐酸瓷瓦破损, 废硫酸渗漏与罐体接触反应产生的氢气, 与由苯-稀硫酸萃取分离器串入废硫酸罐的苯或硝基苯蒸气及罐内空气混合形成爆炸性混合物, 遇到因违章操作产生的明火、高温发生爆炸。通过对这次事故的详细描述、分析, 在吸取事故教训的基础上, 提出了相应的预防措施, 为预防类似事故的发生提供参考。

Abstract: In February of 2007, an accident happened in a chemical Co., LTD aniline factory in Shandong Province. When welding the pipe of the waste sulphuric acid can on the top of the waste sulphuric acid , the tank exploded suddenly. Based on a large number of investigation and analysis on the accident process and the scene of the accident, the reasons that caused the accident were found. The damage of waste sulphuric acid porcelain tile led to waste sulphuric acid leakage and generated hydrogen by reaction with the tank body. Benzene and nitrobenzene steam gone by benzene dilute sulphuric acid extraction separator strung into the workers were on waste sulphuric acid tank. Hydrogen, benzene and nitrobenzene steam and air in the tank were mixed into explosive mixtures. These explosive mixtures encountered open flame and high temperature resulted from workers' illegal operations and then exploded, which caused the tragic accident. Facing the accident, and taking it as a warning for future, through the detailed description and analysis of the accident and in the draw lessons from the accident, the corresponding prevention measures were put forward, in order to prevent the occurrence of similar accidents.

## 参考文献/REFERENCES

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