

Study on deodorization system of a higher concentration hydrogen sulfide by using the contactless module with mesh screens/photocatalysts

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In this study, it was investigated on the deodorization system of a higher concentration hydrogen sulfide (H_2S) with a contactless module including mesh screens and photocatalysts. In a conventional system, it was not able to obtain a higher deodorization efficiency of H_2S due to photocatalyst's poisoning for a long time in the contact modules. To prevent poisoning on photocatalysts and to improve deodorization efficiency, it was synthesized the TiO_2 photocatalyst with a higher specific surface area and doped dye film in the study. The photocatalysts were fixed on the mesh-matrix screen by a dip-coating. From the research, it was improved deodorization efficiency of H_2S from under 50% to over 95% using the contactless modules with a TiO_2 -mesh screen from the research.