

JAS

射流式攪拌曝氣系統

JET MIXING AERATION SYSTEM



泵浦 曝氣系統 廢水處理機械

TAF水泵實驗室認證合格廠
品質管理系統ISO 9001



綠色・安全・永續經營

川源股份有限公司

GSD INDUSTRIAL CO., LTD.

前言 FORWORDS

生物處理是當今廢水處理中最為經濟有效之處理程序，主要分為好氧及厭氧兩大類型，其中好氧處理最為普遍約佔80%以上，好氧處理成敗的關鍵在於是否選用優良高效的曝氣系統，得以用最低的動力將空氣中的氧溶解於水中，除供給微生物分解汙染質所需的氧氣，並可產生良好的攪拌混合效果，避免生物汙泥之沉澱累積。川源JAS射流式攪拌曝氣系統，可適用於調勻池、曝氣池及任何好氧性之生物處理系統，如氧化渠、氧化塘或SBR；其可完全混合攪拌的特性，更適合用於較長汙泥齡(SRT)之高MLSS的活性汙泥法及深層曝氣處理的場合。本套系統，亦可透過控制空氣量的方式，作為脫氮denitrification、硝化nitrification等處理程序配套設備

Biological treatment is the most economical and effective treatment process in wastewater treatment today. It is mainly divided into two types: aerobic and anaerobic, of which aerobic treatment is the most common, accounting for more than 80%. The key to the success or failure of aerobic treatment is whether to choose an excellent and efficient aeration system. It can dissolve the oxygen in the air in the water with the lowest power. In addition to supplying the oxygen required by microorganisms to decompose pollutants, it can produce a good stirring and mixing effect to avoid the accumulation of biological sludge. JAS jet mixing and aeration system can be applied to leveling tanks, aeration tanks and any aerobic biological treatment systems, such as oxidation channels, oxidation ponds or SBR; its characteristics of complete mixing and stirring are more suitable for use for long sludge age (SRT) high MLSS activated sludge process and deep aeration treatment. This system can also be used as supporting equipment for processing procedures such as denitrification and nitrification by controlling air volume.

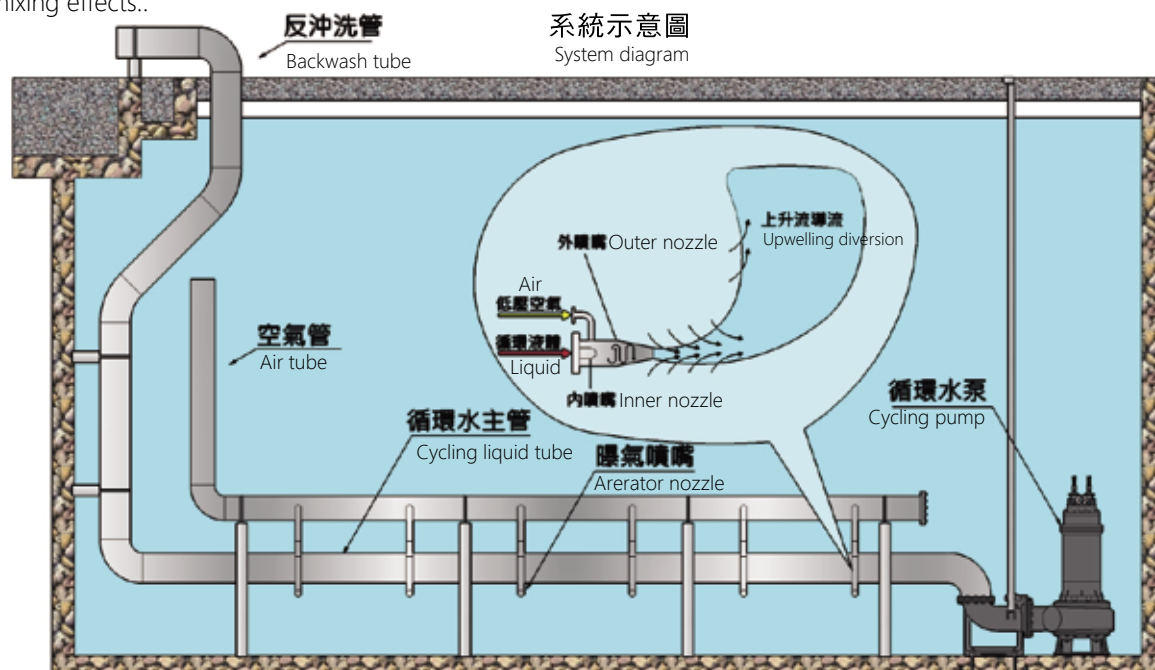
系統結構 SYSTEM & CONSTRUCTION

由噴射式管路系統、一體成形高效能噴嘴組、循環水泵及鼓風機組成，其運作原理：

- ▶ 液體管與空氣主管分開，空氣在每一歧管單獨與每一噴嘴的氣液混合室連接。
- ▶ 循環水泵壓送液體經由液體管內噴嘴到氣液混合室。
- ▶ 鼓風機壓送空氣經由空氣管到氣液混合室。
- ▶ 液體與空氣自氣液混合室混和均勻後，經外噴嘴呈噴射流水平射出。
- ▶ 強勁長距離的噴射流中包括大量微細氣泡，可高效達到曝氣及攪拌混合效果。

It consists of a jet piping system, an integrated high-efficiency nozzle, a circulating water pump and a blower. Its operating principle:

- ▶ The liquid pipe is separated from the air main pipe, and the air is separately connected to the air-liquid mixing chamber of each nozzle in each manifold.
- ▶ The circulating water pump pressure sends the liquid to the air-liquid mixing chamber through the nozzle in the liquid pipe.
- ▶ The blower presses and sends air to the air-liquid mixing chamber through the air pipe.
- ▶ After the liquid and air are uniformly mixed from the air-liquid mixing chamber, they are ejected horizontally through the outer nozzle as a jet stream.
- ▶ The powerful and long-distance jet stream includes a large number of fine bubbles, which can efficiently achieve aeration and mixing effects.

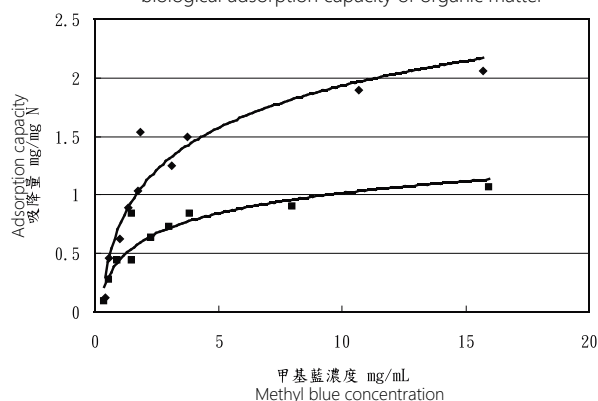


特點 FEATURES

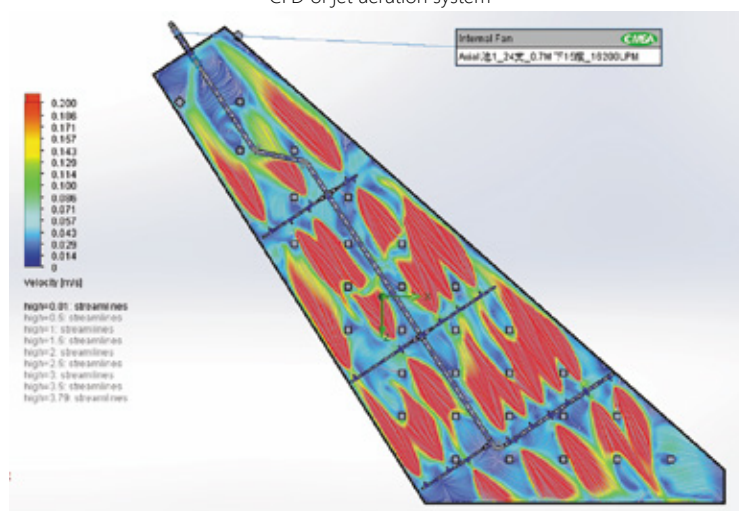
- ▶ 內外噴嘴一體成形，確保噴流之平順。
- ▶ 高傳氧效率、低動力消耗、節省操作費用。
- ▶ 系統配件單純、初設安裝成本低。水中除沉水循環水泵外，無其他運轉配件，維護成本低。
- ▶ 可分開控制溶氧量傳輸及攪拌。
- ▶ 可使用深層曝氣，相對於其他曝氣系統所需之反應池容積較小，節省空間。
- ▶ 搭配反沖洗系統，可克服異物堵塞時停機、洩清水池之困擾。
- ▶ 曝氣噴流區域在水中，可減少水霧、煙霧及臭味等造成之環境衛生問題。
- ▶ 噴嘴組有不銹鋼及FRP等兩種材質可依實際需求選用。
- ▶ The inner and outer nozzles are integrally formed to ensure smooth jet flow.
- ▶ High oxygen transfer efficiency, low power consumption, saving operating costs.
- ▶ The system accessories are simple, and the initial installation cost is low. Except for the submerged circulating water pump, there are no other running parts in the water, so the maintenance cost is low.
- ▶ Dissolved oxygen transmission and stirring can be controlled separately.
- ▶ Deep aeration can be used. Compared with other aeration systems, the volume of the reaction tank is smaller, which saves space.
- ▶ Equipped with a backwash system, it can overcome the trouble of shutting down and draining the pool when foreign objects are blocked.
- ▶ The aeration jet area is in the water, which can reduce the environmental sanitation problems caused by water mist, smoke and odor.
- ▶ The nozzle group has two materials, such as stainless steel and FRP, which can be selected according to actual needs.

比較射流式曝氣與散氣式曝氣系統
生物對有機物吸附之能力

Comparison of jet aeration and dispersive aeration system
biological adsorption capacity of organic matter

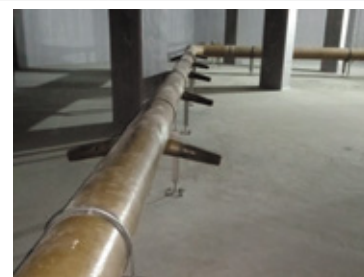


射流式曝氣系統之流場分析
CFD of jet aeration system



實績案例 CASES

- 2011年中華紙漿股份有限公司汙水處理廠生物池5套
- 2012年科學工業園區宜蘭城南基地汙水處理廠調整池4套
- 2014年中部科學園區七星園區汙水處理場一期二階工程調整池4套
- 2016年台南科技工業區汙水處理廠第2期工程氧渠8套
- 2017年六塊厝汙水處理廠噴射式攪拌設備
- 2020年108-109年度六塊厝汙水處理廠設備修繕更新工程噴射攪拌設備3套
- 2020年臺南市永康再生高階處理設備、配水池及配水管網新建工程統包工程





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Changeable Market 以卓越的行動力
should be satisfied with
滿足市場快速變化 Superior Action

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