



ATAL Multi-Stages Flocculation Sedimentation 高效沉淀池 (AMSFS)



Engineering with passion
用心創造

Introduction 简介

ATAL Multi-Stages Flocculation Sedimentation (AMSFS) 高效沉淀池

ATAL Multi-Stages Flocculation Sedimentation (AMSFS) is a technology developed by ATAL Engineering Limited. Our Group has accumulated rich experience and good performance in the process design, equipment integration and "turnkey" project. We have a team of engineers with strong technical capabilities and rich experience in project management. In the process design, equipment supply, installation, commissioning and operation of the process package, it is practical to achieve safety, reliability, economical application, advanced technology, and ensure that the effluent meets the standards.

- **Coagulation Zone**

Colloidal particles of the wastewater quickly react with a ferric or aluminum coagulant, destabilise, and then aggregate into micro flocs.

- **Flocculation Zone**

with the bridge effect of the polymer flocculant, the floc size significantly increases in this zone.

- **Sedimentation Zone**

The flocs then go into the sedimentation zone where the effluent becomes clean and flocs precipitate. Part of the flocs are recirculated to the flocculation zone, while the excess sludge is discharged.

高效沉淀池（AMSFS）是安乐工程有限公司研发的技术。我司在此工艺的设计、成套设备集成和“交钥匙”工程上积累了丰富的经验和良好的业绩，并拥有一支专业技术能力强、工程管理经验丰富的工程师队伍。在工艺包的工艺设计、设备选购、施工、安装、调试和运营中，切实做到安全可靠、经济适用、技术先进、确保出水达标。

- **混凝区**

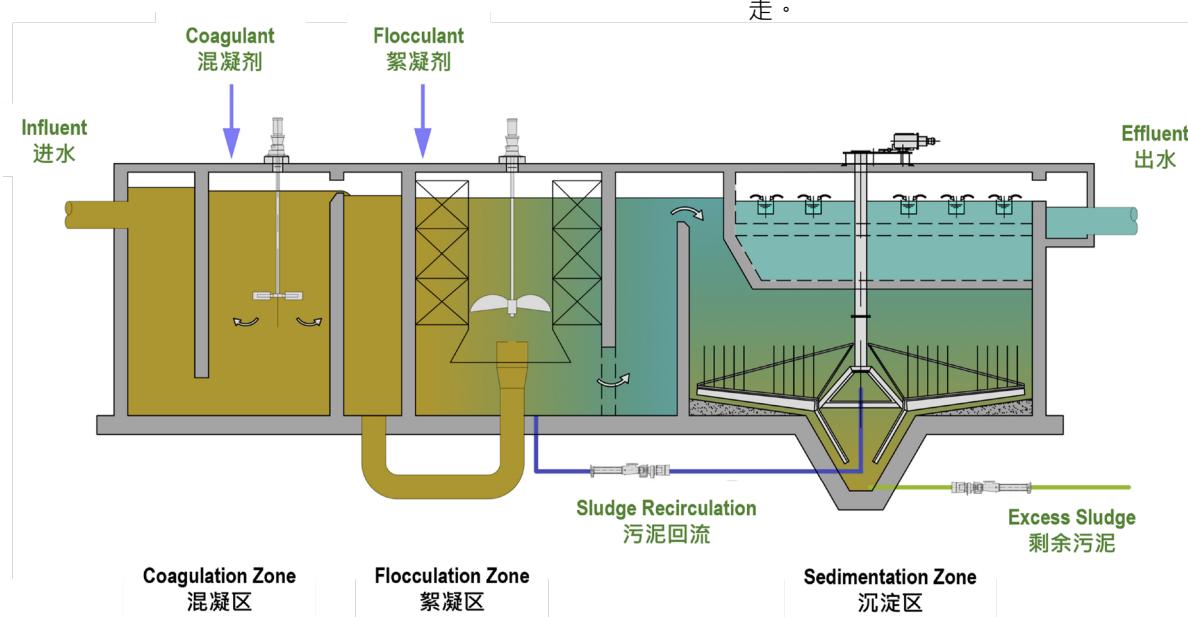
污水与混凝剂铁盐或铝盐快速反应，充分发挥混凝剂高电荷对水中胶体电中和脱稳作用，使微小颗粒聚集在一起。

- **絮凝区**

在高分子絮凝剂的作用下，细小的矾花进一步结成较大的絮体。

- **沉淀区**

经过絮凝区后的污水流入高效沉淀区。高效沉淀区利用浅层沉淀的原理，采用高效的斜管进行泥水分离。中心传动的刮泥板将池底的污泥刮向池的中央并跌落在泥斗中，部分循环至絮凝区，剩余污泥则在排走。



Schematic diagram of AMSFS process
高效沉淀池工艺示意图

Advantages 优点

Excellent Treatment Performance 处理能力出色

- Removal rate of SS: 75-90%
- Removal rate of BOD: 50-80%
- Removal rate of COD: 55-80%
- Removal rate of TP: 50-95%
- SS去除率 : 75-90%
- BOD去除率 : 50-80%
- COD去除率 : 55-80%
- 总磷去除率 : 50-95%

Simple and Reliable Process 成熟领先的沉淀技术

- 10-30 m/h surface loading
- High SS removal rate
- Minor impact by hydraulic loading variation
- High sludge thickening efficiency
- Quick start up
- 10-30 m/h的上升流速
- SS去除率高
- 水力负荷变化影响小
- 污泥浓缩率高
- 系统启动快

Excellent Performance 卓越的性能

- Good effluent quality, high stability
- Less sensitivity to temperature and water quality fluctuation
- 出水水质好 · 稳定性高
- 温度以及水质变化敏感度低

Low Operation Cost and Easy Maintenance 运行成本低易维护

- Chemical recirculation to reduce cost
- High automation during operation
- Less equipment maintenance
- 药剂循环应用 · 有效降低成本
- 处理过程全自动控制
- 维护设备少



Job Reference 案例

Bijie Wastewater Treatment Plant (WWTP), China 中国毕节污水处理厂

Capacity 处理水量

104,000 m³/d, Kz=1.3

Quality 水质

Parameter 指标	Unit 单位	Influent 进水	Effluent 出水
CODcr	mg/L	≤240	≤120
BOD ₅	mg/L	≤120	≤60
SS	mg/L	≤150	≤60
TP	mg/L	≤3.5	≤2.4

Application 用途

Removal of COD, BOD, SS and TP as a primary treatment process

该工艺段作为初级处理，用于降低COD、BOD、SS和TP



Lhasa WWTP, Phase II, China 中国拉萨市污水处理厂二期

Capacity 处理水量

130,000 m³/d, Kz=1.3

Quality 水质

Parameter 指标	Unit 单位	Influent 进水	Effluent 出水
CODcr	mg/L	≤60	≤50
BOD ₅	mg/L	≤20	≤10
SS	mg/L	≤20	≤13
TP	mg/L	≤1	≤0.5

Application 用途

Removal of COD, BOD, SS and TP as a tertiary treatment process

该工艺段作为深度处理，用于降低COD、BOD、SS和TP



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