



2021 ARCHROMA SUSTAINABILITY AWARDS Application Form

3. Title of the application: (for ease of reference by the Jury and voters)

Make it special and specific!

Domino effect to bring down WWTP sludge.

4. Award category

Please choose one of the following award categories. If you wish to apply for several categories, please complete one application form per category.

I/we apply for the following category (select only one per form, 2 forms maximum):

- Business Win
- Diversity & inclusion
- Environment
- Excellence
- Innovation
- Safety First
- Sustainable partnership

5. Elevator pitch

Please create a short text to describe your project/submission to describe it and convince jury and voters why they should select it. (max 50 words)

FeSO₄ replace FeCl₃ from middle of April, 2022. This project leads to decrease sludge output.
Reduce wastewater treatment cost. It brings us a domino effect.

6. Describe how your project and its impact help achieving the category-specific criteria
(Max. 1000 words)

WWTP lab did a piloting test: use FeSO4 to replace FeCl3 during wastewater pre-treatment process. They found that could use FeSO4 dosage by allowing more COD retained in the pre-treated waste water, but these increased level COD could be removed in the following biology steps by lifting up the biomass efficiency, overall could reach a good balance without fluctuation. At the end the sludge is less also. WWTP team decide to use FeSO4 from middle of April,2022. This project leads to decrease sludge press cake output. And it gives us a lot of benefit just like a domino effect.

Compare test of feeding FeCl3 & FeSO4

	sample	consumption	PH	COD mg/l	Sludge g/L
FeCl3	1 L	1.4g	5.1	1973	0.8491
FeSO4	1 L	0.5g	7.4	2086	0.5139
					-0.336 g/L

* 1.4g FeCl3 & 1g FeSO4: the price is similar

7. Describe how your project supports “The Archroma Way to a Sustainable World: Safe, efficient, enhanced, it’s our nature” (Max. 1000 words)

Domino effect to bring down WWTP sludge

This project can reduce wastewater treatment cost. It includes:

- Reduce solid waste
In 2021 fiscal year, sludge output is 855 tons, 71tons/month.
In 2022, from May to July, sludge output is 166 tons, 55tons/month.
=>Reduce 22.5% per month.
- Cost of incineration sludge
- Power consumption (dry sludge equipment)
- Labour cost (dry sludge operation)
- Chemical consumption (FeCl3 and CSL)
- Equipment running (dry sludge equipment & Filter Press)

Date	Sludge tons (after drying)	Electric kwh (drying sludge)	Labor cost days (drying sludge)	FeCl3/FeSO4 tons	CSL tons	Filter press
March	143.7	32967	91.5	69.2	140	5
April	79.62	27114	86	37	105	5
May	57.92	19630	75	33	30	5
Jun	63.46	20048	66	36	40	5~2
July	44.6	15672	59	35	50	2

8. Describe how your project demonstrates the company mindset “Everybody sells!” supported by our ACTS (Max. 1000 words)

All of the team members take part in this project.
Leader gives idea.
Lab assistants do compare test.
Operators give their labour.



I declare to have read and accepted the privacy policy: <https://www.archroma.com/archroma-sustainability-awards-policy>

In case the submitted project belongs to a team, I declare that I have the authorization of all of them and that they have read and agreed with the privacy policy (attach to the submission!!!).