



Acid regeneration station for the anodizing process

ACIDPURE



Quality parts. Guaranteed.

Optimal alumine concentration.
Get consistent quality.



Increased productivity.

Avoid production line interruption.
Autonomous machine.
Reduced maintenance frequency.

Recover up to 94% of the sulfuric acid.



A viable long-term investment.

Acid sulfuric consumption divided by two.
Significant savings on maintenance related costs.
Reduced environmental impact thanks to acid recycling.

SPECIAL
ACID RECOVERY

Why ACIDPURE™ ?

Traditionally, the control of the aluminium concentration of an anodizing bath is done in an approximate way by removing a part of the bath and replacing it with an equivalent volume of demineralized water and sulfuric acid to keep a constant concentration (180 to 240 g/l). This leads to significant costs related to the loss of sulfuric acid and the treatment of effluents with a high acid concentration.

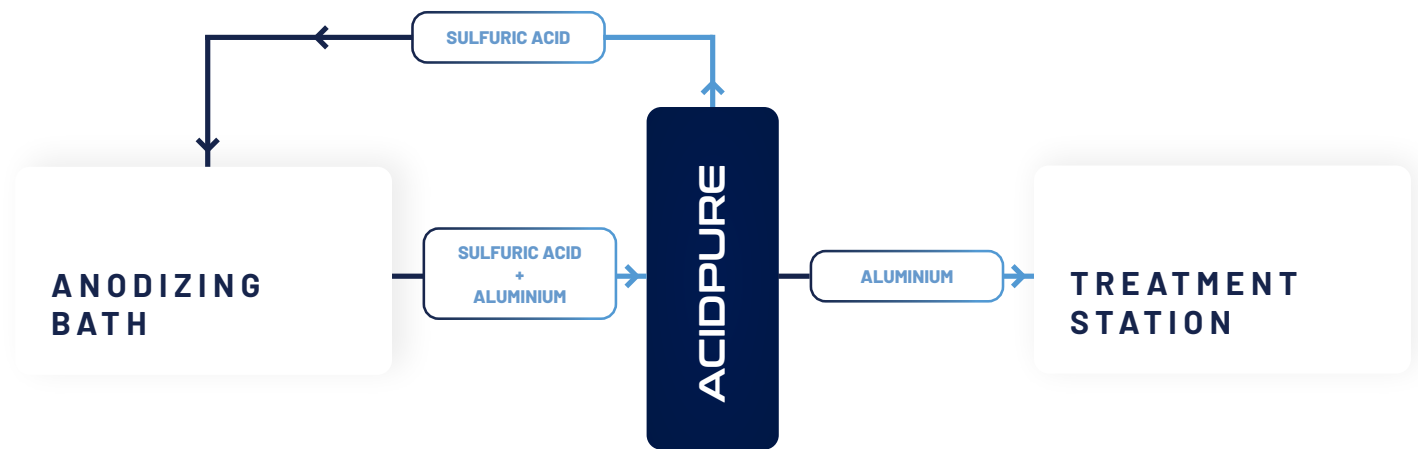
ACIDPURE allows the aluminium concentration in the bath to be controlled and adjusted completely autonomously. The use of ACIDPURE allows to reduce by 70% the quantity of sulfuric acid discharged but also the acid concentration

of the effluents, making them less expensive to treat. The combination of the two results in a significant financial gain.

How does the ACIDPURE work ?

ACIDPURE uses an ion exchange resin to separate the aluminium from the sulfuric acid. The aluminium is then evacuated to a treatment plant while the sulfuric acid is returned to the anodizing bath.

Exemple type pour un bain d'anodisation :



Aluminium removal rate depending on anodizing bath concentration

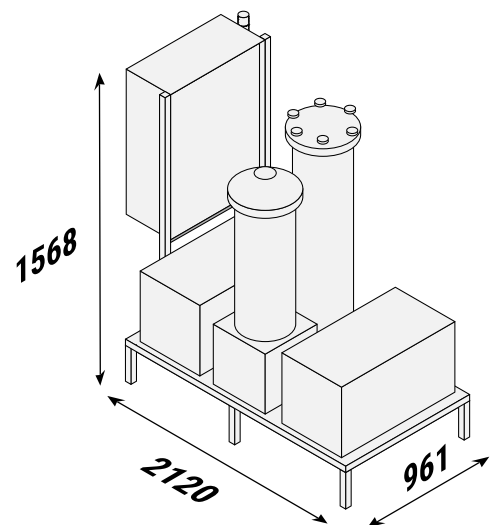
Aluminium concentration (g/l)	8	10	15	20
Removal rate (g/h)	144	180	270	360

Typical effluents concentration with and without ACIDPURE

	WITH	WITHOUT
Acid	14 g/l	240 g/l
Aluminium	3 g/l	10 g/l

ACIDPURE working parameters

Acid	180 - 240 g/l
Aluminium	6 - 20 g/l
Temperature	5 - 60°C



Dimensions (mm)



ACIDPURE



How our client was able to recover 94% of the sulfuric acid from his anodizing baths.

Context

Aluminium anodizing is carried out in baths containing sulfuric acid (H2SO4). The process generates aluminium which must be removed to ensure consistent part quality.

Problem

In order to keep the aluminium concentration around 10 g/l, our customer uses the withdrawal method: every 2 weeks (10 days of production), in order to eliminate 4 kg of aluminium from its bath, the company evacuates 20% of the bath volume to a treatment station. This results in high costs related to the replacement of lost sulfuric acid and the treatment of effluent that is highly concentrated in acid.

Clients settings

Bath volume

2000 l

Sulfuric acid concentration

240 g/l

Aluminium concentration

10 g/l

The Siebec solution

ACIDPURE removes aluminium from the anodizing bath while recycling the sulfuric acid and generating an effluent with a low acid concentration.

Results

After a rigorous follow-up carried out directly in our customer's anodizing workshop, here are the results of our analyses after 10 days of production.



	TRADITIONAL METHOD	ACIDPURE
Lost acid	96 kg	21 kg - 70%
Effluent acid concentration	240 g/l	14 g/l - 94%
Eliminated aluminium	4 kg	4.5 kg + 12.5%

Thanks to ACIDPURE, our customer eliminates 4.5 kg of in-bath aluminium in 10 days of production, completely autonomously.





A question?
Need advice?
Our experts answer you.

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