



CARBOLUX[®]

OUR PATENTED SELF-DEVELOPMENT



OPERATIONAL AREA:

Efflorescence of Carbonate, Sulfate and Chloride

- | | | |
|-------------------|------------------|----------------------|
| √ Cyanide zinc | √ Cyanide silver | √ Zinc-ferrous |
| √ Cyanide cooper | √ Cyanide tin | √ Pickling vats |
| √ Cyanide brass | √ Alk. zinc | √ Acid-cooper |
| √ Cyanide cadmium | √ Alk. cooper | √ Others application |
| √ Cyanide bronze | √ Zinc-Nickel | |

CECO Mefiag



PRECIPITATION OF FERROUS CHLORIDE, FERROUS SULFATE, SODIUM-CARBONAT

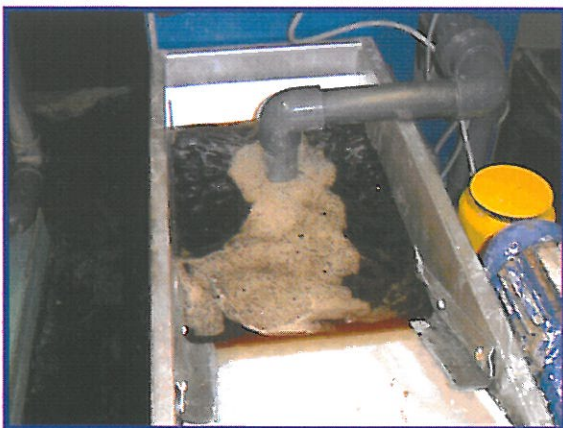


Without affecting production, a small quantity of electrolyte is taken continuously from the bath and cooled down to a precisely defined temperature. The resultant crystals are filtered off and the purified liquor returned automatically to the bath. Afterwards the waste material is easily disposed of in the solid form.

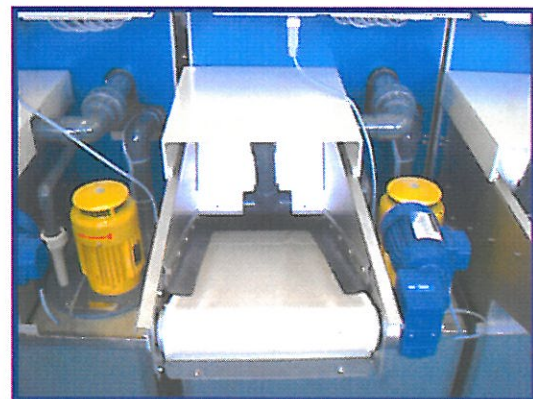




Carbolux brings efficient, costeffective efflorescence of electrolytes and liquors in electrical and hot-dip galvanizing, metal hardening and other industrial operations. This sensationel new Leutwyer development separates waste products from a wide variety of industrial electrolytes and liquors.



Fully automated with belt filter

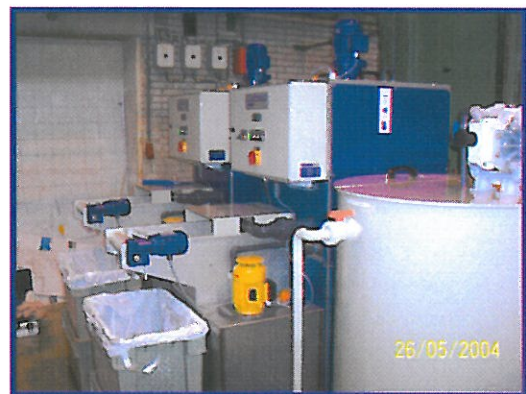


Semi-automatic with bag filter



ADVANTAGES

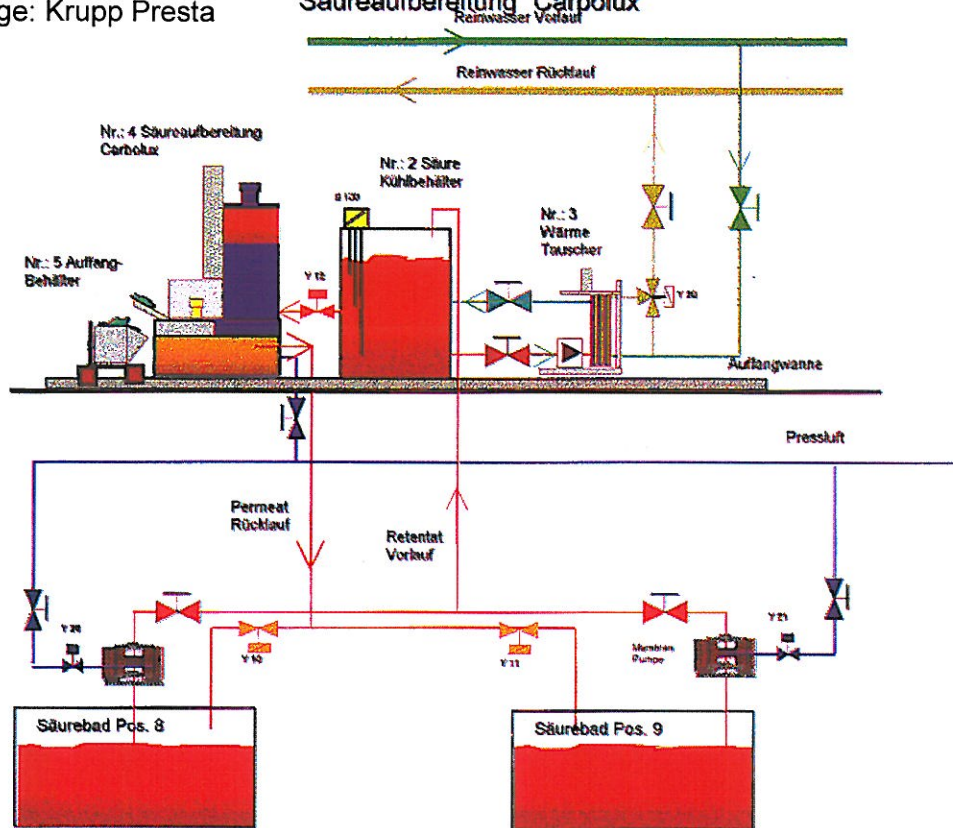
- 👍 Optimal media constancy
- 👍 Long media life
- 👍 Minimale entrainment
- 👍 Lower power consumption
- 👍 Reduced chemicals consumption
- 👍 Less wastewater
- 👍 Uniform product quality
- 👍 Uninterrupted production
- 👍 Easy redissolving
- 👍 Low outlay for labour and waste disposal
- 👍 Complies with DIN 9002/9003
- 👍 Short payback time





Anlage: Krupp Presta

Säureaufbereitung "Carbolux"



The course of Acid Processing

- 1 Acid medium (Retentat) becomes by means compressed air membrane pump alternately from the Pos. 8 and 9 in the cooling container Nr. 2 pumped.
Important: Suction conduction Pos. 8 and 9 must be 20 mm over the Tub bottom.
- 2 Acid medium of the container Nr. 2 becomes over the plate exchange Nr. 3 in circulation on ca. 30° C cool off. (Adjustable)
Cool medium is pure water.
Basic attitude +32° C + - 4°C
- 3 Precooled acid medium will be sucked from the Carbolux plant Nr. 4 from the container Nr. 2 by each batch and by further cooling, the ferrous sulfate will be efflorescenced.
With Temperature regulate, adjustable from +6° C until 0° C will be regulate the efflorescence of the quantity from ferrous sulfate.
- 4 The acid medium without ferrous (Permeat) flows back in loads in the appropriate bath Pos. 8 or 9.
- 5 The ferrous sulfate, witch by cooling of the acid medium who results in form of wet granulates, will be delivered with the conveyor out of the Carboluxplant in the receptacle Nr. 5.
- 6 The resulting remainder liquid from the receptacle Nr.5 must be given manual to the cooling container .
- 7 The ferrous sulfate have to be dispose in accordance with the „Disposal Industrial waste“

PATENTED SELF-DEVELOPMENT

BUNDESREPUBLIK DEUTSCHLAND



URKUNDE

über die Erteilung des

Patents

Nr. 42 00 774

Bezeichnung:
Verfahren zum Entfernen von Carbonaten aus galvanischen
Bädern

Patentinhaber:
Leutwyler, René, Mägenwil, CH

Erfinder:
gleich Inhaber

Tag der Anmeldung: 15.01.1992

München, den 25.11.1993

Der Präsident
des Deutschen Patentamts



Prof. Dr. Häußer



The
United
States
of
America



The Commissioner of Patents
and Trademarks

*Has received an application for a patent
for a new and useful invention. The title
and description of the invention are en-
closed. The requirements of law have
been complied with, and it has been de-
termined that a patent on the invention
shall be granted under the law.*

Therefore, this

United States Patent

*Grants to the person or persons having
title to this patent the right to exclude
others from making, using or selling the
invention throughout the United States
of America for the term of seventeen
years from the date of this patent, sub-
ject to the payment of maintenance fees
as provided by law.*

Bence Lehman

Commissioner of Patents and Trademarks

Stanley Cooper

Attest



WORLDWIDE REFERENCES

Julius Blum GmbH	AT-	Bregenz
WAG Wasseraufbereitung	AT-	Wien
LGTB	B-	Hasselt
Empire Buff LTD	CAN-	Laval, Quebec
Brunner AG	CH-	St. Gallen
Chromwerk AG	CH-	St. Gallen
Färber & Schmid AG	CH-	Oetwil a./L
FL Metalltechnik AG	CH-	Grünen Sumiswald
Foma Galvanik AG	CH-	Bilten
Forster Hermann AG	CH-	Arbon
Friedrich Suter	CH-	Suhr
Galvano Wullimann AG	CH-	Selzach
Haas AG	CH-	Reinach
Huber & Suhner AG	CH-	Herisau
Josef Müller AG	CH-	Samstagern
Kopp AG	CH-	Wettingen
Liechti Metallveredlung	CH-	Niederwangen
Mevag Metallveredlung AG	CH-	Turgi
Ruag Components	CH-	Altdorf
Stalder AG	CH-	Engelburg
Swissair AG	CH-	Zürich - Flughafen
Verzinkerei Kriessern	CH-	Kriessern
MDC Daetwyler	CH-	Bleienbach
Zwilling J.A. Henckels	China	Shanghai
CVP Galvanika s.r.o	CZ-	Pribram
Sroubarna Turnov a.s.	CZ-	Turnov
Aero Space Airbus	D-	Bremen
Assmuss Metallveredlung GmbH	D-	Dietzdbach
Atotech Deutschland GmbH	D-	Feucht
Dr. Fritz Riedel GmbH	D-	Nürnberg
Galvanotechnik Kessel GmbH	D-	Vechelden
Gärtner & Klingler GmbH	D-	Asperg
Harter GmbH	D-	Opfenbach
Herborner Metallveredlung GmbH	D-	Herborn
Hillebrand	D-	Wickede
Holder Oberflächentechnik	D-	Kirchheim/Teck
Holzapfel Metallveredlung GmbH	D-	Sinn-Fleisbach
Ina Schäffler KG	D-	Herzogenaurach



Kessel Galvanik	D-	Vechelden
Renz Metallveredlung GmbH	D-	Plochingen
Schlötter GmbH	D-	Geislingen
Stetzer GmbH	D-	St. Wendel
Walter Hillebrand GmbH	D-	Wickede
Zeschky Galvanik GmbH	D-	Arnsberg
Profothea SA	E-	Madrid
EDF Moret	F-	Moret
Electropol Production	F-	Isigny le Buat
Erard SA	F-	Pont de Chéruy
Galvanoplast S.A.	F-	Lure Cedex
Kerbirio	F-	Gretz Armainvilliers
Marquet Traitement Surface	F-	Cluses Cedex
Michel Caux & C. s.a	F-	Cluses Cedex
Sleti S.A	F-	Vaul en Velin
Sommier SA	F-	Brive la Gaillard
Stocko France SA	F-	67140 Andlau
Hilti AG	FL-	Schaan
Thyssen Krupp Presta AG	FL-	Eschen
Krupp Presta	FL-	Eschen
B.G. Plating	GB-	Birmingham
Huber + Suhner Electronics	GB-	Bicester, oxf.
Royal Mint Königl. Münzdruckerei	GB-	Mid Glamorgan
O.Daring & Co.	GR-	Chalkis
Hydrochem	I-	Bologna
Trevi	I-	Bologna
Chromlus B.V.	NL-	Rotterdam
Enviro-Pure	NL-	Den Haag
Mefiag B.V.	NL-	Heerenveen
Chromlux B.V	NL-3087	BK Rotterdam
Scandymet AB	S-	Kilafors
Ampcor II	USA-	Laporte
Ann Arbor Tech	USA-	Ann Arbor, MI
Belmont Plating	USA-	IL 60131
Blount Inc.	USA-	Lewiston
Caribe GE	USA-	Fort Myers
Chemetco Inc.	USA-	Warren
Delta Faucet CO	USA-	Indianapolis
Franke Plating	USA-	Fort Wane IN
ITT Automotive	USA-	Pontiac, MI
Janco P/C	USA-	Dover
JWI Incorporation	USA-	Holland MI
Marsh Plating Co.	USA-	Ypsilanti, MI
Menasco Inc.	USA-	Euless
Met-Chem	USA-	Cleveland
MID States Engineering	USA-	St. Louis
Mill-Max MFGCorp.	USA-	Oyster Bay
Parker Hannifin	USA-	Wickcliffe



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