

Recyclean Biosystems Europe AB
Biotechnology for surface treatment

Recyclean FRE

System for Flux Regeneration for Hot Dip Galvanizing



FRE Makes Production Chemicals from Waste

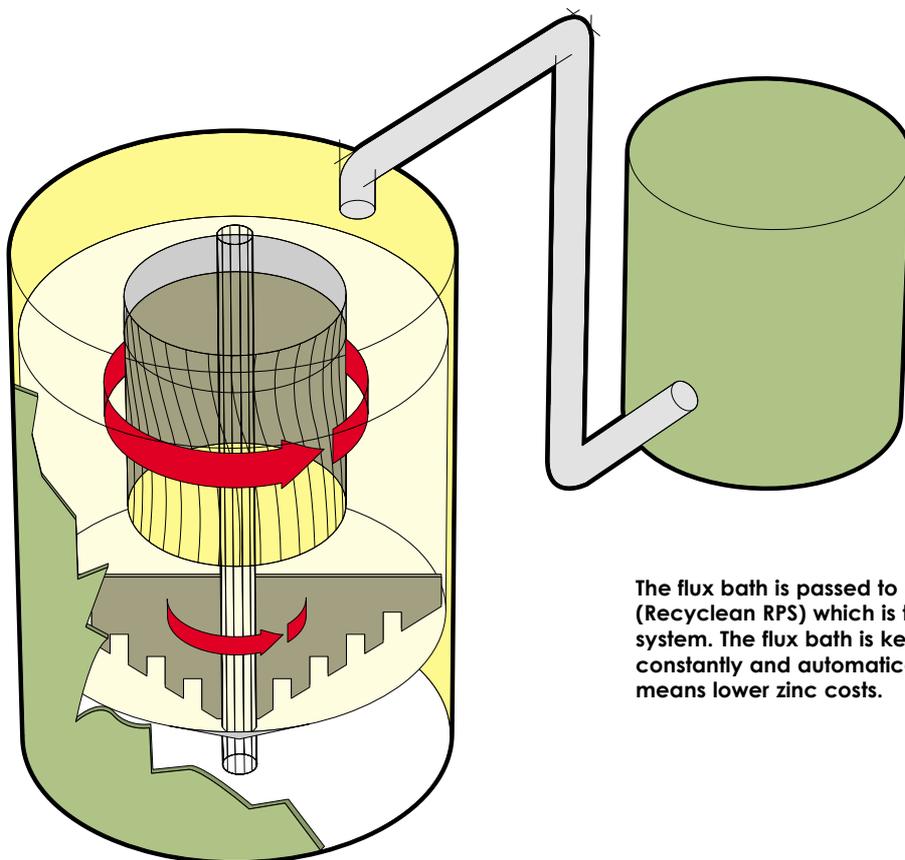
Conventional “dry processes” for hot dip galvanizing always lead to iron deposits in the flux bath.

The material is transferred from the pickling to the flux process with the pickling acid. The iron transferred reacts with the zinc in the zinc chamber and forms dross. Each part of iron bonds up to 25 parts of zinc. This means unwelcome costs as this “slag product” causes higher zinc consumption.

Recyclean FRE is a well-tested system for flux regeneration which keeps the flux bath constantly free from iron. At the same time, the flux bath is maintained automatically with flux salts. The system works on the principle that iron is precipitated while the chlori-

de ions - transferred from the pickling bath - cause a reaction with the added ammonium hydrate. This leads to the formation of ammonium chloride. The used burn-off bath constitutes a raw material source for zinc chloride for the flux bath. The precipitated iron is separated in a special separator and filtered via a filter press. The technique is well tested and many reference systems are in use in Europe.

- Produces flux agent from waste
- Gives a constant low iron content and hence low dross formation
- Few moving parts, simple maintenance, corrosion-resistant
- Rational and profitable environmental technology



The flux bath is passed to a separator/rector (Recyclean RPS) which is the heart of the FRE system. The flux bath is kept free from iron constantly and automatically. The technique means lower zinc costs.

Technical Data

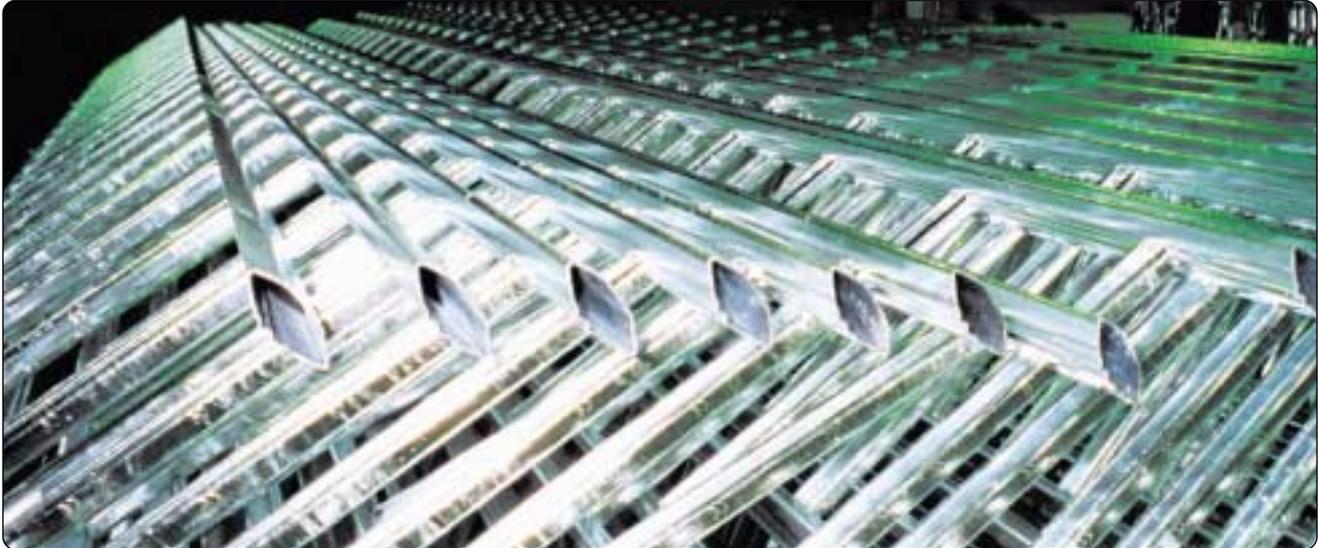
Dimensions

The flow over the regeneration equipment is selected so that a balance is achieved in the flux bath.

This balance is affected by the structure of the pickling process, the quantity and structure of material. Naturally we will help you select suitable dimensions.

Recyclean FRE

	Production (tonnes material/year)	Flow (m ³ /hour)	Volume (litres)
FRE 25	0 - 9.000	2,5	1850
FRE 50	9.000 - 20.000	5,0	3700
FRE 100	More than 20.00	10,0	7700



The material has an even bright surface.

Recyclean Biosystems Europe AB

Sweden

Recyclean Biosystems Europe AB, Aminogatan 34, SE-431 53 Mölndal

Tel: +46 (0) 31-866 750

Fax: +46 (0) 31-864 372

E-mail info@recyclean.se