

Electrodeposition Coatings

Ultrafiltration plant

1. Generally

- Designation: 4"+ 8" – ultrafiltration plant
- Production of Ultrafiltrat by fragmentation of the electrical dipping varnish in down and high-molecular components of
- Ultrafiltrat finds use as kidney function for the cleaning of the electrical dipping varnish and serves for the adherence to important lacquer parameters (conductivity) to
- Rinsing function

2. Impact

The ultrafiltration plant separates high-molecular materials over halfpermeable membrans from low-molecular materials, i.e. the low-molecular lacquer components, like water, amine/acid, water-soluble solvents and salts, form the so-called Ultrafiltrat (Permeat).

3. Components of the Ultrafiltrat

- > 97,5% demineralized water
- < 1,5 Gew,% low-molecular solvent
- < 1,0 Gew,% neutralization agent
- Low-molecular resin components
- Foreign matter and pollutions

The designation is taken from the WA/WK- uf datasheets as standard.
Contamination via foreign substances cannot be taken into account here.

4.- Employment Ultrafiltration

- To rinsing the EP-coated parts off in the attached rinsing zones used
- Over cascade guidance again the lacquer basin supplied
- UF throw for conductivity reduction

5. Throw quantities

Daily UF throw quantity usually amount between 1-10 % of the EP-tank volume, dependent on:

- Bringing in of pollutions into the electrical dipping varnish
- Bacteria situation in the EP-tank

6. Ultrafiltrat - achievement/- capacity depends on

- Adherence to the operating parameters (pressure ratios, rushing over)
- Lacquer system/- temperature
- Regular Ultrafiltrat flushing
- Solid portion of EP-tank
- Bacteria contamination
- Running time of Ultrafiltrat modules

7. Operating parameters

4" - ultrafiltration plant

- inlet pressure: 2,7 – 4,4 bar
- outlet pressure: 1,0 - 2,7 bar
- delta pressure: max. 2,4 bar
- feed: 4 - 6 m³ / h

8" - Ultrafiltrationsanlage

- inlet pressure: 2,7 – 4,4 bar
- outlet pressure: 1,0 - 2,7 bar
- delta pressure: max. 2,4 bar
- feed: 14 - 17 m³ / h

These parameters are the manufacturer's recommendations. Together with the application technique, these parameters can be adapted to match the particular system.

8. Rinsing UF-Module

- A periodic cleaning is recommended to the extension of the standard time of UF-modules. for cleaning please use FREIOTHERM-KTL-UF-Cleaner 400299 or FREIOTHERM-ATL-UF-Cleaner 400300
- With accurate handling of the UF-plant the lifetime of a module is 2 years.