KRAFT POWERCON

Why FlexKraft is first choice for industrial electroplating and electrolysis research

An interview with Martin Paidar, University of Chemistry and Technology, Prague

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01

What is the main area of research that students undertake in your lab, Martin?

Our students have been looking at how precisely controlling electrical current during plating plays a crucial role in optimizing deposition, in terms of even and consistent distribution and thickness. This is particularly relevant for electroplating titanium and aluminium with silver to help increase durability – this is not a straightforward process.

02

What makes this particular electroplating process different to other tests?

Our students are using large electrode areas – in monopolar and bipolar arrangement – with high current (200 to 300 amps). Coating of contact and surfaces prevent oxidation or overheating. This research is being done with aim of eventually scaling up for industrial application.

03

How does KraftPowercon FlexKraft solve the problem of managing high current?

Not many rectifiers are able to operate within our parameters, but the FlexKraft™ rectifier with two power modules easily delivers the stable high current output we need.

It's very important to enable students to experience using high current. This helps them to visualize the industrial context and what it's like to work with – for example, even just seeing the size of the cable for high current helps with that understanding.

04

You mention stability – why is that so important?

When the students are researching cell design for electrochemical water treatment, water electrolysis processes, it's important that studies take place under stable and well-defined laboratory conditions, so that their observations of observed phenomena (such as mass transfer and bubble generation) can be accurately and consistently observed and results can be considered reliable. And to undertake mathematical modelling, we need to know the specific input data. FlexKraft enables us to meet these stringent requirements during testing.

05

Are there any other benefits to using FlexKraft in your lab?

The modern design and compact footprint means that the rectifier can be safely and easily accommodated in a relatively small lab environment.

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