

## Graver and Dow Present Top Quality Co-Branded Products for Nuclear Power Industry

Graver and Dow recently agreed to cooperatively distribute and process ion exchange resins – including heritage Rohm and Haas branded products – for the nuclear power industry. As a leader in ion exchange technology, we are pleased to expand our services to better serve customers.

This agreement delivers significant benefits for your plant:

- Graver can fully process and supply all Graver and Dow ion exchange resin brands, including Amberlite™, to precise individual specifications. Plants can specify Dow brands furnished within strict limits for TOC and for both pre- and post-UV sulfate and chloride.
- Graver can co-brand its Gravex® brand with the Dow logo to ensure and verify that these products are

made from genuine Dow resins. We will provide all Dow brand products labeled with both logos, indicating the high level processing that ensures adherence to all specifications.

- Graver will ensure and verify that Graver and Dow brand resins meet your specifications. Our NUPIC-audited Quality Assurance program meets the criteria of 10 CFR 50 Appendix B. Further, Graver's laboratory analyzes for and reports all ion exchange resin requirements. We provide Certificates of Analysis and Conformance for all Dow and Gravex brand products.
- Graver can custom-process resin components, combining them to create uniformly blended mixed beds. Graver can pre-rinse a Graver, Dow or Rohm and Haas brand resin to limit your rinsing time and improve start-up sequences.
- With global ion exchange demand increasing, lead times for resin – including high-purity uniform particle size resins – are expected to be long throughout 2012. For example, mixed bed availability may be particularly lengthy. **Continued on Page 2**



### IN THIS ISSUE | SPRING 2012

**1 Graver and Dow Present Top Quality Co-Branded Products for Nuclear Power Industry**

**2 Lower Differential Pressure through Deep Bed Polishers**

**3 Introducing Nanodex™ Filter Papers for Nuclear Customers**

**Personnel News**

**4 Sales & Services**

## Graver and Dow Present

Continued from Cover

Graver plans delivery schedules well in advance to achieve suitable deliveries; it is important to work with your Graver representative to develop inventory component projections that will meet your required delivery dates. Determining your specific needs helps Graver meet customer delivery expectations.

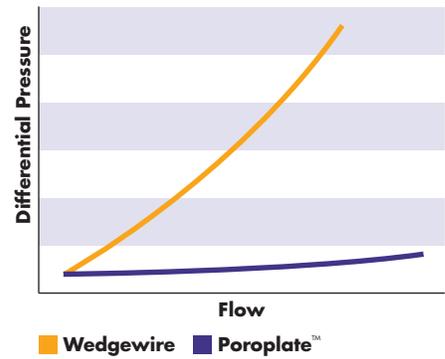
- In addition to careful advance planning with customers, we maintain an inventory of several branded resin products. We quickly supply freshly blended mixed bed products such as Amberlite™ IRN170. Graver also inventories Li-7/OH to convert cation exchange resin to make Amberlite NG products such as IRN217, IRN317 and IRN318. Graver co-branded versions are available very quickly.
- Graver maintains an ample stock of Gravex® GC 3-1 SC and Gravex GR 3-9 NG, which are high quality mixed beds for installed stator cooling demin systems and for chemical cleaning systems that reduce flow restrictions. Because we use Dow components for these high quality Gravex products, they can be co-branded with the joint Graver/Dow label.

For more information contact Gil Royal, Utility Sales Manager for Graver Technologies, or your account representative.

## Lower Differential Pressure Through Deep Bed Polishers

Graver Technologies is introducing PowerGuard® with Poroplate\* underdrain laterals to replace traditional wedgewire assemblies. PowerGuard offers smaller size micron openings while providing nearly four times the overall porosity of wedgewire and maintaining significant structural strength. The Poroplate laterals are fitted to promote easy coupling, which eliminates threaded pipe and the tedious task of positioning the porous portion of the lateral downward.

Many plants have undergone power uprates since they were originally designed. The increased flow through the polisher vessel wedgewire laterals creates an almost 1:1 direct increase in differential pressure (DP). Poroplate allows increased flow with a very low increase in DP. Contact your representative or Gil Royal for more information.



\*Poroplate is a registered trademark of Purolator-Facet

**GRAVER AND DOW RECENTLY AGREED TO COOPERATIVELY DISTRIBUTE AND PROCESS ION EXCHANGE RESINS – INCLUDING HERITAGE ROHM AND HAAS BRANDED PRODUCTS – FOR THE NUCLEAR POWER INDUSTRY. AS A LEADER IN ION EXCHANGE TECHNOLOGY, WE ARE PLEASED TO EXPAND OUR SERVICES TO BETTER SERVE CUSTOMERS.**

Stator Cooling Water Treatment



PowerGuard®



## Introducing Nanodex™ Filter Papers for Nuclear Customers

Over the next several issues of Powerline, we will feature questions and answers about Graver's Nanodex™ Ion Exchange Filter Papers. Graver is introducing the Nanodex papers, which offer much higher ion exchange capacities, as an existing brand is being discontinued.



### Q: What is the purpose of Nanodex Ion Exchange Filter Papers?

**A:** Nuclear power customers use Nanodex filter papers for quantitative analytical purposes to monitor corrosion and satisfy fuel warranty requirements. Applications include condensate demineralizer influent and effluent, condensate storage tank, final feed water, reactor water cleanup, and stator cooling water. For boiling water reactors (BWRs), these filter disks are employed to satisfy the General Electric nuclear power fuel warranty. In terms of contaminants, the ion exchange filters disks are used to monitor corrosion product transport, isotopic separations, activity levels, and trace metal quantities.

Among cationic species, transition metals including iron, copper, nickel, chromium, zinc, and cobalt are

commonly monitored. Zinc analysis is particularly important for suppression pools while copper analysis is correspondingly important for stator cooling. Lead, calcium, magnesium, sodium, and cesium are also monitored by some nuclear plants. Iodine is the most common anion species measured using ion exchange filter disks, though they also will pick up other halogens (i.e., chloride, bromide), sulfate, phosphate and dichromate.

### Q: Are there other reasons to use Nanodex Ion Exchange Filter Papers?

**A:** Nanodex Ion Exchange Filter Papers can be used anywhere in the ion exchange process where quantitative analytical separations – whether physically separated or exchanged – are required, including basic chemistry and pharmaceutical applications.



### Q: What type of Nanodex Filter disks are available?

**A:** Graver Technologies offers two types of ion exchange filter disks: AX 100 anion and CX 200 cation. The AX 100 filter paper contains strongly basic, quaternary ammonium functional sites in the chloride form, while the CX 200 filter paper contains strongly acidic, sulfonic acid functional sites in the hydrogen form. The functional sites in the AX 100 filter paper may be converted to other ionic forms (i.e., hydroxide) as desired for special analytical purposes.

## Personnel News



Graver recently promoted **John McPeak** from vice president to president. His prior position at Graver includes general manager of the

Utility Group. Before joining Graver in 2007, McPeak served as vice president of Operations and vice president of the Biochemical Division at a specialty chemical manufacturer.



Joining Graver in January from a French sister company, European Sales Manager **Robert Schiedlbauer** brings 20 years

of water treatment experience with an emphasis in process water applications. He is an expert in membrane applications including ultrafiltration, nanofiltration, reverse osmosis and electrodeionization. Schiedlbauer is based in Doisson, France, and operates out of Graver's Stuttgart, Germany, location.

**GRAVER TECHNOLOGIES CONTINUES TO SET THE INDUSTRY'S PACE IN ION EXCHANGE RESIN PURITY, CONSISTENTLY MEETING TODAY'S TOUGHER REQUIREMENTS FOR NEARLY UNDETECTABLE LEVELS OF CHLORIDE, SULFATE AND TOC FOR HIGH-PURITY CONDENSATES AND OTHER PROCESS WATERS.**



## Graver Technologies

200 Lake Drive  
Glasgow, DE 19702  
[www.gravertech.com](http://www.gravertech.com)

## Sales & Services

**Gil Royal**  
Utility Sales Manager, North America  
**P** (302) 731.3554  
**C** (302) 668.4163  
**E** [groyal@gravertech.com](mailto:groyal@gravertech.com)

**Maureen Vollinger**  
Global Customer Service/Inside Sales  
**P** (302) 731.3516  
**P** (800) 533.6623  
**F** (302) 369.8356  
**E** [mvollinger@gravertech.com](mailto:mvollinger@gravertech.com)

**Seth Kaufman**  
Regional Manager NW/Canada  
**P** (704) 854.3422  
**C** (704) 904.5168  
**E** [skaufman@gravertech.com](mailto:skaufman@gravertech.com)

**Wayne Norwood**  
Regional Manager Southeast  
**P** (301) 953.7731  
**C** (301) 332.7934  
**E** [wnorwood@gravertech.com](mailto:wnorwood@gravertech.com)

**Greg Cieplucha**  
Regional Manager West  
**P** (312) 867.1801  
**C** (312) 502.5725  
**E** [gcieplucha@gravertech.com](mailto:gcieplucha@gravertech.com)

**Mark Koster**  
President, Utilities International Division  
**P** (302) 731.3513  
**C** (302) 463.5896  
**E** [mkoster@gravertech.com](mailto:mkoster@gravertech.com)

**Robert Schiedlbauer**  
European Sales Manager  
**P** (49) 711.3154.7160  
**C** (33) 6.19.33.11.10  
**E** [rschiedlbauer@gravertech.com](mailto:rschiedlbauer@gravertech.com)

**Erbao Zhang**  
Country Manager/China  
**C** (86) 137.0188.2885  
**E** [ezhang@gravertech.com](mailto:ezhang@gravertech.com)

**Xu Xiangdong**  
Regional Manager/China  
**C** (86) 139.1058.0025  
**E** [xuxd@gravertech.com](mailto:xuxd@gravertech.com)

**Bin Cong**  
Regional Sales Manager/China  
**P** (86) 21.5238.6576  
**C** (86) 138.1783.3997  
**E** [bcong@gravertech.com](mailto:bcong@gravertech.com)

**Qingyuan Liu**  
Regional Sales Engineer/China  
**C** (86) 136.2371.4398  
**E** [qliu@gravertech.com](mailto:qliu@gravertech.com)

**Al Tavares**  
Ion Exchange Product Manager  
**P** (973) 690.5290 ext 2370  
**C** (201) 787.3696  
**E** [atavares@gravertech.com](mailto:atavares@gravertech.com)

**Brian Raab**  
Utility Filter Product Manager  
**P** (302) 731.3512  
**C** (443) 907.9113  
**E** [braab@gravertech.com](mailto:braab@gravertech.com)

**Dr. Peter Yarnell**  
Ion Exchange Development Group Leader  
**P** (302) 731.3529  
**C** (302) 731.1707  
**E** [pyarnell@gravertech.com](mailto:pyarnell@gravertech.com)

**Charlie Mosser**  
Service Manager  
**P** (817) 326.3626  
**C** (817) 233.9358  
**E** [cmosser@gravertech.com](mailto:cmosser@gravertech.com)

**Anand Harohalli**  
Director Business Development  
**P** (302) 731.3543  
**C** (302) 319.0353  
**E** [anand@gravertech.com](mailto:anand@gravertech.com)

**Customer Service**  
Graver Technologies, LLC  
**P** (800) 533.6623  
**E** [info@gravertech.com](mailto:info@gravertech.com)  
**W** [www.gravertech.com](http://www.gravertech.com)

**United States**  
Graver Technologies, LLC  
200 Lake Drive  
Glasgow, DE 19702  
**P** (800) 533.6623  
**P** (302) 731.1700  
**F** (302) 731.1707

**China**  
Graver Technologies, LLC  
RM 16D, Building B  
No. 1118, Changshou Road  
Shanghai, China 200042  
**P** (86) 21.5238.6576.608  
**F** (86) 21.5238.6579

**Europe**  
Graver Technologies, LLC  
Koenigstrasse, 10c  
D-70173 Stuttgart, Germany  
**P** (49) 711.3154.7160  
**C** (33) 6.19.33.11.10  
**F** (49) 711.3154.7170



## Graver Technologies

 A member of The Marmon Group  
 A Berkshire Hathaway Company

All information and recommendations appearing in this newsletter concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of such products. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Graver Technologies as to the effects of such use or the results to be obtained. Graver Technologies assumes no liability arising out of the use by others of such products. Nor is the information herein to be construed as absolutely complete, since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Amberlite is a DOW trademark. Powerline, Gravex and PowerGuard are registered trademarks, and Nanodex is a trademark of Graver Technologies.



Scan here to learn more  
about Graver Technologies