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Equipment designed to quickly, safely, and efficiently help techs recover refrigerant

Recovery Sector Aims to Keep Pace

BY RON RAJECKI
THE NEWS STAFF

ORLANDO, Fla. — The refrigerant recovery and reclamation sector is striving to keep up with the changes taking place in the world of refrigerants, which means it is constantly creating new products to seamlessly adapt to the latest batch of regulations and refrigerant phaseouts.

Stefanie Kopchick, North American marketing manager, refrigerants, The Chemours Co. (formerly DuPont Performance Chemicals), noted that in 2016, R-22 consumption allowances will shrink to 18 million pounds (65 percent lower than 2014 levels), and only four years remain before production of R-22 ceases.

“As we reach the final years of the R-22 phaseout, it’s increasingly important for contractors and equipment owners to establish refrigerant management plans,” Kopchick said. “These plans should include repair of system leaks, recovery, reuse and/or reclaim, replacement of equipment that has reached the end of its useful life, and, when applicable, arrangements to retrofit to non-ozone-depleting direct-replacement products, such as Chemours’ Freon™ MO99 (R-438A) for air conditioning and Opteon™ XP40 (R-449A) for refrigeration.”

Kopchick added that contractors can find an authorized refrigerant reclaim center and obtain details on Chemours’ R-22 buy-back and banking options by visiting <http://bit.ly/ChemoursManage22>.

At Diversified Pure Chem (DPC), general manager Dave Couchot said the company recently began buying recovered R-410A from contractors because it foresees changes in the hydrofluorocarbon (HFC) landscape.

“The most immediate and significant of these changes may be brought about by the U.S. International Trade Commission’s investigation into and ruling on China’s alleged dumping of HFC blends and components,” Couchot said. “Anti-dumping duties will likely lead to a shortage of HFC products — especially R-404A — in 2016.”

DPC’s goal, he said, is to collect as much of this gas as possible, reclaim it, and return it to the

market. This will augment supply while giving contractors a way to offset potential price increases.

“Beyond this, we are priming for an HFC phasedown, which could come as soon as

this year or the next,” Couchot said. “In 2015, we substantially increased our capacity to process and reclaim HFC gases at our plant in Texas. So, while we continue to focus on buying and

selling R-22, we are poised to meet contractors’ needs in the coming years.”

Maureen Beatty, executive vice president of National Refrigerants Inc., pointed out

that Air-Conditioning, Heating, and Refrigeration Institute’s (AHRI’s) Standard 740, “Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equip-



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ment,” was approved in late 2015 with the inclusion of flammable refrigerants. It is important to note, however, that the standard only rates the recovery rate for refrigerants, whether nonflammable or flammable, and does not address the safety of the recovery equipment.

“The industry and the U.S.

Environmental Protection Agency [EPA] will look to UL to verify the safety of recovery equipment for the recovery of flammable refrigerants,” Beatty said.

Beatty, who chairs the AHRI Standard 740 and Guideline K Subcommittees, added that AHRI is in the process of reviewing “Guideline K-2015: Containers for



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SAFER RECOVERY: Maureen Beatty (left), executive vice president, National Refrigerants Inc., shares that the industry is looking into ways to make recovery of flammable refrigerants safer during a discussion with Russ Barnthouse (right), vice president of sales at United Refrigeration Inc.

Recovered Nonflammable Fluorocarbon Refrigerants,” and will propose a grey/red paint scheme for recovery cylinders suitable for flammable refrigerants as well as the requirement for a left-handed thread outlet for valves used for flammable refrigerants.

Sheb Powell, product development manager, Refco Mfg. Ltd., said the biggest trend facing service technicians in 2016 will be issues related to the proper use and recovery of hydrofluoroolefin (HFO) and hydrocarbon (HC) refrigerants — in particular R-1234ze or R-32 in the residential and mid-range sector and R-744 (CO₂) in commercial equipment.

“There is considerable buzz around hydrocarbon refrigerants — CO₂, in particular,” Powell told *The NEWS*. “A tour through any international HVACR exposition immediately shows the trend in commercial equipment using HC refrigerants.”

He noted that tools and training will need to be further developed for the extremely high operating pressures in



YELLOW JACKET MANTOOTH: Michael Lanners, director of domestic sales at Ritchie Engineering Co. Inc., explains the expanded capabilities of the manufacturer’s ManTooth product line.

these systems.

“CO₂ is rapidly becoming the refrigerant of choice installed in chilled soft drink vending machines,” Powell said. “Refco repeatedly receives and fills requests for tools to accommodate this change from traditional

HCFC [hydrochlorofluorocarbon] refrigerants to the new HC refrigerants, including R-744, R-600a, and R-290.”

Powell expects the major air conditioning brands to embrace HC refrigerants for use in room air conditioners and packaged ter-



REFCO ENVIRO-DUO: The Refco Enviro-Duo is approved for use with class A2 mildly flammable refrigerants, including R-32, -1234yf, and -1234ze.

minal air conditioning units, but noted that the EPA's Significant New Alternatives Policy (SNAP) program approvals currently limit an HC refrigerant charge to only a few ounces, so their application will be limited to small-capacity systems, for now.

Powell also said he anticipates a bit of a war between R-32 and R-1234ze.

"Both sides make good points, and it will be a few more years before one side is a clear winner," he said. "To my knowledge, most air conditioning equipment manufacturers are holding back to see which way to go next. And, let's be honest, it's taking ages for R-22 to be completely phased out. Just imagine how long it will take for R-410A to be made obsolete and replaced by a mildly flammable refrigerant."

Powell noted that Refco's Enviro-Duo recovery machine is approved for use with class A2 mildly flammable refrigerants, including R-32, -1234yf, and -1234ze. In addition, Refco manufactures manifolds and gauges for use with all HC and HFO refrigerants.

Michael Lanners, director of domestic sales, Ritchie Engineering Co. Inc., identified a number of trends in the refrigerant recovery space, including the continued evolution and growth of ductless and unitary equipment, which will necessitate that field service personnel increase and grow their equipment competencies, both from an installation and service standpoint as well as a performance standpoint.

"There are too many parts changers out there, including

contractors who are working for a quick buck," Lanners said.

There is a need for contractors to be professionally prepared to dialogue with perspective customers. This includes building their skills in the areas of knowing what's best for an application, what's best for a particular customer, listening more than telling, and taking a fact-based business/return-on-investment approach.

Additionally, he noted there's an ongoing need for contractors and technicians to get product and system training whenever possible and for contractors to align themselves with good products and good vendors who readily provide solutions and opportunities for skill advancement.

"Contractors need to invest in themselves," Lanners said. "They need to invest in tools that take the guesswork out of their jobs and are simple to operate; tools that are too complicated and not user-friendly are not desirable."

Jahn Stopperan, director of product development for Ritchie Engineering, added that electronics will continue to gain momentum in refrigerant recovery. This means both integrating electronics into products for improved precision and control as well as increasing the need for technicians to become much more skilled in wireless and advanced electronics.

In terms of products, Ritchie Engineering will continue the expansion of its wireless ManTooth product line. The company introduced an enhanced user interface for its hand-held devices and added the ability for the devices to store/log data and for users to print out and



NOW BUYING R-410A: Dave Couchot, general manager of Diversified Pure Chem, said the company recently began buying recovered R-410A from contractors.

manipulate data for future uses.

The company also introduced a new overall platform to complement its ManTooth pressure-temperature devices.

"We are introducing a wireless vacuum gauge and a wireless vacuum gauge and pressure/temperature combination set that all operate on one united platform,

including our existing models," Stopperan said. "This reduces the number of tools a technician needs and speeds up the process of performing service."

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