

Best-laid plans

We take the industry's pulse a year on from the phase-out of virgin R22. To begin, IDS Climalife's **Peter Dinnage** surveys the scene

■ **Looking into a crystal ball can be tricky at the best of times, but predicting the future in the air conditioning and refrigeration industries has proved notoriously difficult.** Opinions were many and varied on how the UK cooling industry would cope in 2010, the first year when it would be illegal to use virgin HCFCs for the maintenance and servicing of refrigeration equipment. With 2011 now well under way, it can be safely said that the transition to a 'virgin R22-free' world was relatively trouble-free in the UK – certainly more straightforward than many of us expected 18 months ago.

The RAC industry coped with this brave new world remarkably well, despite the price of reclaimed R22 reaching a cost level approximately five times higher than the final price of the virgin R22 gas last year – and having to bear the cost of HFCs rocketing in price at the same time.

This year should start to see some interesting developments in the realm of HFO refrigerants, although the real impact of these very low-GWP gases is probably a couple of years away, due to production capacity restraints and the need for a range of field trials in industrial and commercial applications.

The area of conversions is an interesting one. Many plant operators elected to convert their systems prior to the date of HCFC phase-out, and IDS noticed a marked increase in conversion activity from 2009 onwards. The trend continued unabated in 2010, although many delayed the change to longer-term conversion by running some systems on reclaimed R22 (R22R) and others on replacement products such as R422D and R417A.

For smaller equipment still operating on R22, operators often chose to retrofit either R417A or R422D when the systems leaked. As contractors and operators become familiar with converting systems, the need for R22R appears to diminish accordingly.

A by-product of the healthy rate of conversions has been a steady flow of R22, taken from the systems for reclaiming. This is to the benefit of users who are still effectively tied to R22, such as operators of large flooded systems operating close to capacity.

That said, there are still signs developing that the availability of reclaimed R22 may be reduced in future. This will be in part due to supply and demand, but the EC's REACh (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation may also have an effect. This legislation requires chemical producers to pay a registration fee for each product from July 2013, and given this is only a year before the final phase-out of reclaimed R22, questions have been raised about whether producers will choose to pay the fee or stop production a year early.

Despite what we have said about looking into a crystal ball, this continued uncertainty coupled with

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the facts that refrigeration and air conditioning systems do still leak and that the next generation of refrigerants are still a way off, means we believe we will see the popularity of conversions continuing.

Another important factor is the growing estate of successful conversions and of contractors experienced with them. Equipment operators now have easy access to case studies and system performance data from comparable conversion projects. The proof of successful operation is there for all to see and promoted by those confident to convert.

We now see R422D as the clear market leader in the UK as a replacement for R22 conversions, with R417A also popular in many applications. A major incentive to operators still considering their options is that the cost of these direct replacement products is usually 10-15 per cent less than that of reclaimed R22.

While field data shows that new equipment gives improved efficiency and performance gains in comparison with older systems, the most obvious way to improve efficiency and reduce energy costs is to reduce system leakage. This will be a major issue for our industry in 2011.

The real impact of this will be felt after 4 July when F-Gas legislation will have a major impact on refrigeration and air conditioning companies whose engineers are not qualified to the new training standards. Let's not forget that all individuals whose work involves the handling of refrigerants within the scope of the F-Gas Regulation will be operating illegally unless they have completed the new F-Gas qualification by this date. Companies employing personnel who carry out these activities must also have full F-Gas company certification by 4 July. Interim certificates, which became mandatory on 4 July 2009, will no longer be valid.

This move can only help improve containment, though the short-term impact could well be a dearth of suitably qualified refrigeration engineers. ■