

Using Psychrometry in Water Losses

In water damage restoration schools one of the most challenging subjects for students to grasp is psychrometry. Once a person masters the concepts and understands the principles of drying, however, psychrometry is actually very simple. It is a challenge to learn psychrometry in a couple of hours in a classroom setting. However, in a hands-on environment when you can see and experience the actions of psychrometry, the benefits of using it become apparent.

The Basics

Many successful restorers use a digital thermohygrometer to get information and make decisions. If the relative humidity drops as a drying job progresses, it is sometimes safe to assume that a drying job is progressing well. However, sometimes this information can deceive us. Comparing relative humidity at different temperatures can be a dangerous practice.

Wet Seeks Dry

This is the most basic and fundamental concept of restorative drying. If we remember that wet air always moves towards dry air, then we can use psychrometry to help us determine what is needed to make that happen.

The most important number that psychrometry can give us is grains per pound (GPP). If we calculate the GPP (grains per pound of dry air; also called the specific humidity or humidity ratio), record and analyse the GPP and put our thinking caps on, we can do a better job. The GPP is expressed as a whole number that ranges from 0-200 on most psychrometric charts. If we remember that air with a higher GPP contains more moisture vapour than air with a lower GPP, we have most of the information we need. Following are several scenarios where we can put this information to use and help us to make better decisions.

Job Monitoring

If we record the GPP on the job every day, we can avoid some of that deceiving information mentioned earlier. If the temperature remains constant from day to day, seeing a daily reduction in the relative humidity tells us that we are making progress. However, since the temperature on most jobs rises as the job progresses, the relative humidity can actually give us incorrect information. The only way we can know if our drying system is balanced is to compare the GPP.

Comparing Indoor and Outdoor Air

Let's say it's summer and the humidity outdoors is high. This air probably has a significantly higher GPP (ever higher than the indoor air during a water damage situation). This would automatically tell us that we would need more dehumidification than normal because of the additional humidity that the outdoor air is exerting on our job.

Let's look at the situation in the winter. Since cold air cannot hold much moisture (even when saturated), we have a real advantage when the outdoor air is cold. You can use the outdoor air to help your drying job (as long as you maintain indoor heat).

A technique employed by many restorers is to "assist" the indoor moisture vapour outside. We must keep the heat up indoors, but we can open fireplace flues, activate ventilation fans, or even slightly open windows (making sure security issues are addressed). Many people will argue this technique saying that the energy loss is too great. Many others will say that we can't charge for opening windows, etc.

One fact that we need to understand is that dry air usually costs money. Dehumidifiers use energy and energy is often a limited resource, especially on larger jobs. If we don't have to use as many dehumidifiers, we can likely use more

air movers. And, after all, air movement is the number one factor in getting fast evaporation from materials.

Analyse Dehumidifier Performance

We can also determine the efficiency of our dehumidification technology by using psychrometry. If we measure the GPP of the air going into the dehumidifier and the GPP of the air coming out, we can calculate the difference between the two and determine the "grain depression".

A Challenge

Calculating the GPP on every job every day can help us make better decisions. Every job is different, every customer is different and every adjuster is different. Conditions also change. So, the only way to know for sure if a balanced drying system is being achieved is to understand the principles of psychrometry and to apply those principles.

I would like to challenge everyone reading this article. Get out that dusty psychrometric chart or calculator, learn again how to use it and put it to use on every job you do for the next month. You will start doing a better job, and you will finally understand the dreaded "P" word.

Sid Lunday has been in the cleaning and restoration business since 1976. Sid is an IICRC-approved instructor and teaches restoration classes and seminars internationally for Dri-Eaz Products. He also manages the Training Department at Dri-Eaz, which includes the Center for Advanced Restorative Drying as well as other restoration training functions. Sid also chairs the Technical Advisory Committee for the Institute of Inspection, Cleaning and Restoration (IICRC). Your comments are welcome at (360) 757-7776 or sidl@dri-eaz.com. Copyright © 2001, Dri-Eaz Products, Inc.

By Sid Lunday, WLS



D.R.L. QUARTERLY Personal Achievement AWARD

Tim Greaves Takes Top Award

Tim Greaves of DRL Derbyshire has become the first winner of the DRL Quarterly Personal Achievement Award.

Tim was nominated for his dedication whilst working under extreme pressure, customer care skills and outstanding working practice. An award well earned.

Upfront with...

Disaster Restoration

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FIRE & FLOOD RESTORATION

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England Cricket Captain Presents Essex Growing Business Awards 2001

Nassar Hussain took time out from his England duties to present the Essex Growing Business Awards 2000. The award ceremony took place at the Waterfront in Chelmsford, Essex and was attended by many of the counties' leading companies.

Having been put forward for the award by the companies' bankers NatWest and meeting the criteria set out by the judging panel, it was a great honour for DRL to be chosen as one of the three finalists.

The presentation followed an interesting and motivating

speech by Nassar Hussain, who felt he would be a good candidate to work for Disaster Restoration following his recent tour of Pakistan and Sri Lanka.

The other two finalists were both vehicle retailers: BMW and Nissan. To be one of the three finalists for this award was a great honour and recognition of all the hard work put in by the DRL network during the year and DRL was privileged to achieve third place. The award came in the form of an engraved cut-glass bowl, plus free consultancy hours by BDO Stoy Hayward, sponsors of the event.

DRL Company Director wins Martin L King Award



DRL Director Bill Lakin has recently been honoured with winning the Martin L King award for outstanding performance. Martin L King presented this yearly award at the Association of Specialists in Cleaning and Restoration Convention in the USA.

Bill has been an active member of the National Institute of Disaster Restoration (NIDR) for a number of years, overseeing the structure and implementation of numerous training courses. He was the first person to receive the Certified Restorer accreditation and the Martin L King award outside the USA.

Last year Bill organised an event on restoration for the NIDR in London; this included visits to Hampton Court, Windsor Castle and the Tower of London. Over forty NIDR members from the USA attended this convention.

From The Desk

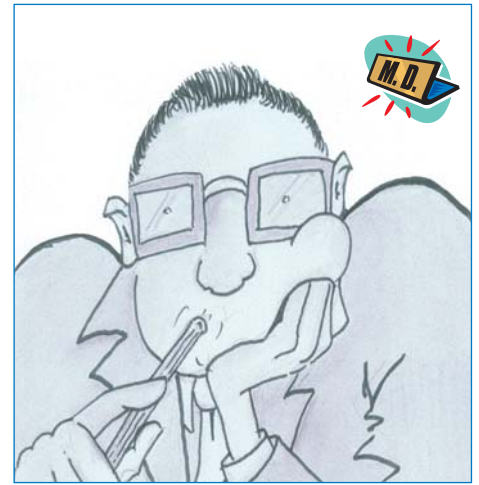
Recent flash flooding across Essex brought unexpected business to the company. Edmund Carr, our accountants, suffered severe flooding to the basement area of their recently redecorated office in Chelmsford.

The DRL Basildon office, which is home to our B-dry Hire Centre, also received severe water damage to several offices, which damaged a number of computers, office furniture and internal decoration. Both floods happened late one Saturday evening and required emergency

response to ensure that important archived material was saved.

A balanced drying system was set up in both properties, within hours of the water ingress, helping to prevent any consequential loss. This emergency response and urgent action by our insurance brokers helped to soften the blow; unfortunately for our accountants, they were re-flooded a couple of weeks later.

Brian Armstrong - M.D.



Operations Department

DRL operations are currently undergoing a series of exciting changes that aim to make the department more efficient and effective.

With the increasing volume of work we wanted to ensure that the current quality of service given by the operations department continued to the same high standards. To achieve this, the team members began to monitor their workflow processes and procedures on a daily basis. Continually questioning what we did, how we did it and why we did it allowed the department to redefine its parameters.

This process, however, was soon engulfed by the introduction of a customised computer system. The very concept created an air of excitement, but also there was anxiety and fear of change. As a team we discussed how this would affect the operations department and how it could enhance our productivity.

We are currently working in conjunction with other representative sections of DRL by using working party groups. Each working party aims to develop ideas for their section that are fed back to the project group, which consists of senior directors and managers. We feel that this will ensure a fully integrated system that will fulfil the requirements of the entire business.

Ultimately, the system will contain a fully interactive database to store job details and documents relating to a claim. It will be user friendly and searching for information will be quick and simple. The main features of the system will include:

Direct external email facility for all internal staff

Comprehensive information regarding each claim

The ability to produce reports on most data

A document management system - hopefully helping to produce a paperless environment

Self-populating correspondence

Integration with all sections of the business, including accounts, therefore providing a seamless process from beginning to end of a claim.

It has been decided to phase the implementation of the new system to ensure any glitches do not affect our quality of service. At each phase there will be a structured development programme to ensure all system operators are fully trained and professionally competent.

The operations department is enthusiastic about the new system and the input so far has helped greatly in the working design. We feel the future is bright for DRL and with the implementation of these new systems it will continue to improve our speed and efficiency and therefore the service provided to our clients and their customers.



Questions and Answers



1) What is "dew point"?

The temperature at which the humidity in air reaches saturation (100% RH) and will condense from that air to form condensation or "dew" on surfaces. Fog (condensed moisture on small particles within the air) forms in air when dry bulb temperature and dew point are within 2°F, plus or minus, of each other.



1) Why should metal fittings be cleaned as soon as possible following heavy smoke damage?

The compounds of smoke contain strong acids and are corrosive.

Do you have any technical questions you would like answered? If yes, then please write to:

Joanne / Terry, DRL, 2 Lex Building, Cranes Close, Basildon, Essex SS14 3JB

Or telephone 01268 595200, and we will do our very best to include them in the next edition of Upfront.

On 16 March DRL said, "Pants to Poverty".

In order to raise money and help the Red Nose cause, a day of fun and frolics that everyone could join in was arranged. Throughout the day there were a number of competitions.

Starting the festivities was a doughnut-eating contest between two claims handlers. Anticipating a fierce contest, each had twenty-five doughnuts on their tray and three minutes to eat as many as possible. Sadly only eight and a half doughnuts were consumed, but the suggestion of chocolate eclairs for next year seemed to go down well, unlike the doughnuts! Other events were pin the red nose on the clown, guess the number of jellybeans in the jar and guess the names of two cuddly toys.

Everyone joined in with the Red Nose spirit by bringing something that was red for lunch and dressing in something red. One lady had the courage to take it one step further; dressing in white bloomers with red noses, a "pants to poverty" tee-shirt, long red socks and a red hard hat, she stole the show.

Through sponsorship and goodwill, all the staff at DRL, Basildon and Stafford, raised £170.51, which was doubled by senior management. In addition, a number of the site operatives joined in and kindly donated £120 between them, making a grand total of £461.02.

The day was a great success and was enjoyed by all those who participated, but it is important to remember the underlying cause. Comic Relief now funds nearly eight hundred projects in both Africa and the UK and, with our continuing support, can carry on helping those in need.



DRL Sussex

Simon fish first became a DRL technician in 1995 covering the Brighton and Folkstone region. This area endured serious flooding in 1996 giving him the aspirations to expand his business within Brighton and the surrounding areas.

Laurie Whitworth joined Simon as a partner in January 1998, which created an opportunity for them both to take out a joint Area Co-ordinator agreement covering the Sussex region. Within three months of the formation, Laurie and Simon employed their first full-time employee, Phil Hussey. Phil is still with them and has matured into a first-class technician, well respected locally with loss adjusters, claims assessors and policyholders. It was a "baptism of fire" for Laurie and Phil as DRL Sussex were part of the DRL national contingency team working in the Midlands region on numerous properties, which had been seriously affected during the 1998 floods.

A few technicians have come and gone since, but they now employ a further three. Mick Price had a wealth of experience when he joined them in January 2000. Mick

loves working on fire claims and has established himself as an internal member of their team. Frank Brimmel joined them soon after and, although not a qualified technician, he is trained as a vehicle mechanic and on many occasions has kept the vans and truckmount in action. John White joined as a decorator and his skills have always received commendations from loss adjusters and customers alike. Unfortunately, redecoration works have been limited in recent times, but he has now passed his DRL induction course and performs fire and flood duties. Ian Price is a trained electrical appliance engineer and, before joining them as a technician, was the sole proprietor of a computer repair and retail outlet.

Since the Midlands flooding of 1998, DRL Sussex has steadily built up a store of drying equipment and tools. More than that, they have gained invaluable experience in dealing with major flooding. This put them in good stead for the various localised floodings in Crawley, Fittleworth and Pulborough in the early part of last year, culminating with the severe flooding of Lewes and Uckfield in October.

The Loss Adjusters View

Arriving on site for the first time to assess the damage and implement the policy cover can, on occasions, become a matter of conflicting issues between the adjuster and the policyholder. This can occur when the policyholder's expectations far exceed that of the cover within the policy at the time of the incident. There may have been a number of reasons for this. One of these, which could have been avoided, is when the contractor who has been instructed to attend the site to carry out the emergency works required has already informed the policyholder that certain items are beyond restoration and they will be replaced by the insurance company. They then expect automatic replacement of items that may not be covered within the policy type that is in force. We therefore have an immediate conflict of what is expected and what the policyholder is actually entitled to. The need to work together is essential to allow the claim to proceed without unnecessary problems being put in the system.

The contractor should not inform the policyholder that they can expect replacement on Beyond Economic Restoration (BER) items; they are expected to provide a full report of what they feel can or cannot be restored to pre-incident condition to the adjuster handling the claim or the insurance company. The adjuster can then act upon the cover within the policy.