



- *The 2019 ISPE Filtration Workshop*
- *SPATEX 2020*
ISPE Workshop Programme
- *The ISPE Back-to-Basics/Revision Seminar*



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NOTICE TO ALL READERS

Articles and advice in the ISPE Magazine are for guidance only. Further professional advice should always be sought before acting upon, or refraining from acting upon, a course of action. Health & Safety is of paramount importance and the correct PPE (personal protective equipment) should always be utilised before undertaking any job.
If in doubt, ASK!

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Front Cover Picture

A stunning four side vanishing edge pool in beautiful public gardens near Helston in Cornwall.

The pool features an Ocea pool cover built into the floor connected to an AS Control Unit and Besko valve, allowing complete control of the overflow system and is fitted with a Da Gen low chlorine system, with pH and floc control, giving the pool a perfect water quality. The AS control unit is supplied through Pollet Pool Group with the Da Gen dosing system, which controls the balance tanks, pumps etc. The pool is finished with 1200 x 1000 porcelain tiles and basalt coping from Cranbourne Stone.

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Editorial

Now the blistering hot days of Summer are behind us, we turn to the Autumn, the traditional start of the next round of ISPE Seminars, Workshops and other Industry training events.

There are various references to the next ISPE events in this issue and one major event is of course SPATEX 2020. The ISPE are delighted to present three days of free-to-enter workshops on a variety of subjects; something of interest to anyone in the pool and spa trade - see pages 3,5,6 & 7 for details.

I mention the 'spa trade' and this is a great opportunity to let any readers know that ISPE welcome spa/hot tub engineers, installers, service personnel or those who have anything else to do with these ever-popular products. ISPE will be arranging a whole seminar on the subject of spas, hopefully in November 2019, but do let us know if we can assist with your training in any way, and let it be known that spa/hot tub engineers are more than welcome to join ISPE!

I hope to see lots of you during the busy seminar season and at SPATEX but in the meantime, keep busy!

Ross Alcock - September 2019

ISPE Publications

Space does not permit a full listing here but please see the ISPE website (www.ispe.co.uk) for details of the ISPE Technical Papers and non-ISPE publications e.g. *Wilson's Handbook*, the PWTAG books, *Swimming Pool Water*, and *Hot Tubs for Business Use*. All available post free from ISPE Seminars.

All Eyes on SPATEX 2020

Autumn... when the shadows grow longer, animals start to hibernate and, for those in water leisure, thoughts inevitably turn to the high point in the Industry's calendar... SPATEX 2020 in January. Yes, the countdown has begun for the UK's one and only dedicated wet leisure Exhibition at Coventry's Ricoh Arena, Tuesday January 28th to Thursday 30th.

An integral part of any SPATEX is, of course, the programme of ISPE technical workshops. The free workshops, each year impart a massive amount of knowledge and provide free education and training that is recognised throughout the Industry as being a unique and very valuable resource. For 2020, ISPE's General Secretary, Ross Alcock, has once again pulled the proverbial rabbit out of the bag by curating a programme that is brimming with current issues and vital information.



Jimmy Lamb, TnISPE(Cert.)

The ISPE workshops will be pivotal in the furtherance of SPATEX 2020's declared aim to increase environmental awareness.

There will be sessions on Water Testing (and how this may help the environmental impact of a pool), Environmentally Friendly Pool Heating, Energy Savings for your Pool by using Covers, with a separate session on Automatic Valves and a look at Water Conservation.

Whilst there will be an emphasis on the promotion of green issues, there will be something of interest for everyone over the three days of the technical programme. For those keen to record their Continuous Professional Development, attendance certificates with one CPD point per Workshop will be issued after the event.

The Show will see the return of the popular 'Mega-Demo' (at 12.30 pm on the Wednesday) for 2020, featuring a live strip-down and re-build of a pump, with full commentary, looking at typical problems - ideal for anyone who services pumps!



Chris Carr, FISPE and Phil Barlow, FISPE - for 2020 it'll be pumps!

There's also something a bit different on Leak Detection! It's at

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1.30 pm on the Tuesday if you want to find out more!

And there's more! In addition to the ISPE workshops, SPATEX will once again be offering a parallel programme of seminars in Arena 2 on a diverse range of topics, such as the most successful ways of marketing your company and the latest health and safety legislation.



Allen Wilson, FISPE will return in 2020.

SPATEX is, of course, the ideal hunting ground to source new products and innovations. New ways to save energy is a topic high on the agenda and with over a hundred international and domestic exhibitors, there will be lots of new products and special offers, including those that support a low energy, low carbon footprint.

Got a query on a project? Tap into a unique pool of free expertise! Besides ISPE, SPATEX 2020 is fortunate to be able to count the Industry's many esteemed associations amongst its supporting partners and call upon their expertise, for instance, PWTAG (Pool Water Treatment Advisory Group), STA (Swimming Teachers' Association) and LCA (Legionella Control Association). There's no better place to seek advice or guidance, and all for free!

Visit www.spatex.co.uk to see SPATEX's impressive list of exhibitors, details of the free double seminar and workshop programme and register for the Show's regular e-newsletters. SPATEX 2020 – Tuesday 28th January to Thursday 30th January. The Ericsson Exhibition Hall, Ricoh Arena, Coventry CV6 6GE is easy to get to - just 500 yards off the M6 and within two hours commuting time of 75% of the population, it offers 2,000 free on-site car parking spaces. For further information, please contact Michele or Helen in the SPATEX office
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SPATEX 2020

THE POOL, SPA & WELLNESS SHOW

ISPE PROGRAMME OF WORKSHOPS AND DEMONSTRATIONS

ERICSSON EXHIBITION HALL, RICOH ARENA, COVENTRY

Tuesday 28th January - Thursday 30th January 2020

Organised by the ISPE on behalf of SPATEX Ltd.

Ref.	Subject Presentations	Tue. 28 th Jan.	Wed. 29 th Jan.	Thur. 30 th Jan.
1.	HEALTH AND SAFETY UPDATE FOR THE POOL & SPA OPERATOR An annual update on legislation and cases over the past 12 months and details of any forthcoming changes. (20 minute session) Colin Jenkinson, MISPE - Leisure Safety Training	10.15- 10.35		
2. NEW	WHAT PARAMETERS ARE TESTED IN A SWIMMING POOL AND WHY ARE THEY TESTED? Can testing help a pool become greener? Colin Day, FISPE - Lovibond Tintometer (30 minute session)	11.00- 11.30		
3. NEW	THE ISPE HOME STUDY COURSE - FILTRATION An overview of the ISPE Home Study Course and a look at what's new in the newly updated Filtration manual. Chris Carr, FISPE - C.C. Filtration Services (20 minute session)	11.45- 12.05		
4. NEW	COST-EFFECTIVE SOLUTIONS FOR PREPARING & TILING SWIMMING POOLS Discussing time and cost savings for swimming pool tiling to ensure cost-effective yet long-lasting installations. Adrian Ashby - Ardex Ltd. (30 minute session)	12.30- 1.00		
5. NEW	THE WONDERS OF LEAK DETECTION An in depth video presentation with a question and answer session covering all aspects (and equipment) required to detect different types of leaks from pools and save time and money from guessing where to dig next! (30 minute session) Phil Barlow, FISPE - Phil Barlow Swimming Pools	1.30- 2.00		
6. NEW	DESIGN & CONSTRUCT PROFESSIONAL INDEMNITY INSURANCE – A Market in Turmoil? Phil Bristow - Nsure (20 minute session)	2.30 2-50		
7. NEW	PVC PIPE INSTALLATIONS AND SUPPORTS Do it right, Do it once. John Cheek, FISPE - Hydrospec Ltd. (30 minute session)	3.15 3.45		
8. NEW	PERFORMANCE AND ENERGY SAVING BENEFITS OF GOOD HYDRAULIC DESIGN For:- Chemical stability, Water clarity and Operational cost saving. Mike Causer, MISPE - Dryden Aqua (30 minute session)	4.00 4.30		

Indicates that the Workshop includes content which is particularly environment-friendly, e.g. saving the planet's resources, money, energy, time and/or has a 'green' theme.

Ref.	Subject Presentations	Tue. 28 th Jan.	Wed. 29 th Jan.	Thur. 30 th Jan.
9. NEW	ENVIRONMENTALLY FRIENDLY AND ECONOMICAL SWIMMING POOL HEATING - INVERTER HEAT PUMPS WITH R32 REFRIGERANT What is an inverter heat pump? Comparison of performance, running costs and CO ₂ consumptions against other heat sources. Plus a comparison of R32 refrigerant to old refrigerants and a look at flammability. Carlie Griffiths - Dantherm Ltd. (20 minute session)		10.15-10.35	
10. NEW	ENERGY SAVINGS FOR YOUR POOL The use of pool covers and other technology to lower running costs. Will Dando, FISPE - Plastica Ltd. (30 minute session)		11.00-11.30	
11. NEW	WATER TESTING Is It Just About Chlorine and pH? Colin Day, FISPE - Lovibond Tintometer (30 minute session)		11.45-12.15	
12.	PUMP STRIP-DOWN & TYPICAL PROBLEMS Phil & Chris will talk through a practical demonstration – stripping a pump down, exploring typical problems experienced with pumps, and the best way to overcome them. (45 minute session) Chris Carr, FISPE - C.C. Filtration Services and Phil Barlow, FISPE - Phil Barlow Swimming Pools		12.30-1.15	
13. NEW	ENERGY SAVINGS VIA THE USE OF AUTOMATIC VALVES How evaporation may be reduced and water savings can be made through the use of air & water temperature control, and by utilising automatic switching from the balance tank to the main drains in overflow pools. (20 minute session) Jimmy Lamb, TrnSPE(Cert.) - Pollet Pool Group		1.30-1.50	
14. NEW	TYPES OF BACTERIA IN POOLS AND SPAS What are they? What can they do? How can we control them? Allen Wilson, FISPE - Studies in Work (30 minute session)		2.15-2.45	
15. NEW	INSTALLATION REQUIREMENTS FOR MAIN DRAINS Incredibly, some pools are still being built with a single main drain or two or more main drains plumbed incorrectly. This session will underline all the reasons it's so important to get this right. John Cheek, FISPE - Hydrospec Ltd. (30 minute session)		3.00-3.30	
16.	<i>Details to be revealed soon.</i>		4.00	

Ref.	Subject Presentations	Tue. 28 th Jan.	Wed. 29 th Jan.	Thur. 30 th Jan.
17. NEW	THE HIDDEN RISK OF HOT TUBS Why the correct regime of disinfection and routine maintenance is vital. (30 minute session) Allen Wilson, FISPE - Studies in Work			10.30-11.00
18. NEW	WATER CONSERVATION FOR YOUR POOL How to reduce evaporation and recycle swimming pool wastewater. Will Dando, FISPE - Plastica Ltd. (30 minute session)			11.15-11.45
19. NEW	SUPPORTING OPERATORS WITH HEALTH & SAFETY LAW AND GUIDANCE IN SWIMMING POOLS Lessons learnt from previous fatalities in swimming pools and simple control measures that you may not have included in your current solutions. (30 minute session) Jo Talbot – Royal Life Saving Society UK			12.15-12.45
20.	THE WONDERS OF LEAK DETECTION (Repeat of session no. 5.) An in depth video presentation with a question and answer session covering all aspects (and equipment) required to detect different types of leaks from pools and save time and money from guessing where to dig next! (30 minute session) Phil Barlow, FISPE - Phil Barlow Swimming Pools			1.00-1.30

Organised by the industry, for the industry!
All workshops are worth one CPD point.

Who is... Kim Mumford, MISPE?

Kim was recently co-opted to serve on the ISPE Council and will stand for formal election at the AGM in October (as part of the 122nd ISPE One-Day Seminar on 10th October 2019).

Council may co-opt any member to serve on the Council (with that person's agreement - it is not compulsory!) if it is felt that person has the time, experience and knowledge to assist in a particular aspect or with the general business of the Council. Co-opted members do not have a formal vote but are encouraged to participate at all levels of discussion (the ISPE does not have an 'Executive Committee') and may be called upon to help with a particular project.

Kim is no stranger to this as she has actively assisted at ISPE Seminars, on the ISPE stand at SPATEX, and of course, at the ISPE Filtration Workshop for a number of years.



Kim busy preparing certificates at the ISPE Filtration Workshop.

For the benefit of those who do not know Kim, we have included a brief profile opposite.

Prior to being in the pool industry, Kim worked in the leisure industry for many years as a lifeguard, personal trainer, aerobic/step and spin instructor and eventually worked in leisure management, involved with running various fitness centres in hotels, independent health clubs and residential fitness centres, which included commercial swimming pools.

Kim attended her first SPATEX event in 2002 and visited the ISPE stand with the purpose of picking up as much information as possible on how to manage a residential development with a residents-only leisure facility with a swimming pool. Kim set up and managed this pool for a property management company, writing the O & M Manual, NOP (Normal Operating Procedures) and training staff and has been to SPATEX/ISPE events every year since.

However, Kim only registered with ISPE as a Member in 2011, after she and her partner Phil co-founded Philip Barlow Pools in April 2010. Kim has regularly attend ISPE seminars & other industry events. For the last 6 years Kim has assisted at the Filtration Workshop held annually at Plastipack – St Leonards-on-Sea, as well as helping out on the ISPE stand at SPATEX and at ISPE seminars at the Watermill Hotel and elsewhere, quite regularly.

In her role for the past decade at Philip Barlow Pools, Kim has become a 'hands on' pool engineer

working alone on site on regular maintenance works and with Phil with all manner of activities from basic maintenance, plumbing up plant rooms, liner installations, new pool builds, equipment installation such as air source heat pumps, water chemistry testing/dosing as well as dealing with the company accounts!

Hobbies

Still very much into health and fitness, Kim says, “When time allows I escape for a 30 min yoga session or 30 min treadmill run in the home gym”. Kim loves to read nutrition books. Travel – Kim adds “I always look forward to travelling at the end of an exhausting season although this year is less exotic than the usual Maldives break. However, this December we’re off to southern Spain hiring a villa (with

pool) in the mountains. So lots of exercise, walking in the mountains, good food and wine. Can’t wait!”.

ISPE Diary Dates

The 122nd ISPE One-Day Seminar

Thursday 10th October 2019
Nr. Hemel Hempstead, Herts.

The 123rd ISPE One-Day Seminar

Tuesday 19th November
Clevedon, North Somerset

The ISPE Filtration Workshop

Tuesday 5th November
St. Leonards-on-Sea, E. Sussex

ISPE Back-to-Basics/ Revision Seminar

February 2020

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at Plastipack Ltd., St, Leonards-on-Sea, East Sussex

(By kind permission of Peter Adlington, FISPE)

This workshop, presented by Chris Carr, FISPE and Philip Barlow FISPE, on behalf of the Institute of Swimming Pool Engineers, will give basic training & guidance to new recruits and/or service personnel with limited experience of swimming pool filtration and servicing. The Workshop is particularly useful for ISPE Students in preparation for the Filtration exam (although the workshop is not part of the course).

This comprehensive Workshop will be for between eight and sixteen delegates and the cost, including lunch and all refreshments, will be £60.00 (ISPE Members and Students) and £80.00 (non-members).

Towards the end of the day there will be a multiple-choice questionnaire. Certificates indicating 4 CPD points will be presented to delegates reflecting how successfully these questions are answered. There will be ample opportunity to ask questions throughout the day.

WORKSHOP SCHEDULE *(approximate times)*

- 09.00 – 09.30 Arrival - Report to Chris Carr, FISPE or Phil Barlow MISPE**
Coffee/Tea & Biscuits.
Health & Safety briefing.
- 09.30 – 10.15 Measure Twice – Cut Once – Part 1**
A PowerPoint presentation on: Pipe-work installation and correct pipe-work sizing.
- 10.15 – 11.00 Pipe-work Practical Trade Test**
Delegates get 'hands-on' making a pipe-work test set.
- 11.00 – 11.15 Coffee/Tea - Comfort break**
- 11.15 – 12.00 The Principles of Filtration - Part 2**
A PowerPoint presentation by Chris Carr, 'Sizing a pump, sand filter & pipe-work for a domestic pool'.
- 12.00 – 12.30 The Principles of Filtration - Part 3**
Continuation - PowerPoint presentation by Chris Carr, 'Installation & servicing tips'.
- 12.30 – 13.00 Buffet Lunch**
- 13.00 – 14.30 Filter & Pump Practical Trade Test**
There are two elements to this practical experience:
1. Filter strip-down & rebuild,
2. Pump strip-down & rebuild.
- 14.30 – 14.50 Mini Exam - A 20-minute multi-choice exam based on the day's events.**
- 14.50 – 15.00 Comfort break**
- 15.00 – 15.30 A 30 minute guided tour of the hosting company.**
- 15.30 – 16.00 Sizing Equipment for Commercial Pools - Part 4**
A PowerPoint presentation by Chris Carr to show how to calculate equipment sizing for a commercial pool.
- 16.00 – 16.30 Q & A - Exam Results - Presentation and Close**

Please Note: Times and/or activities may be subject to change.

If you are interested in attending the Workshop, please register your interest with the ISPE Office (01603 499959 or ross@ispe.co.uk) where we will be holding a waiting list. Once the minimum number of delegates is reached, we will contact everyone on the list to confirm their place and will send an invoice. Anyone who is unable to attend will go on the list for the next event.



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Case Study - 'Jolly Gel' from MSI

The most important feature of any swimming pool is that the water must be 100% safe at all times. In order to ensure that this is the case, satisfactory filtration with correct sanitation, monitored by accurate water testing, is absolutely essential. Whilst a typical swimming pool filter unit may produce excellent results on its own, there are times when it could do with a little help by means of flocculation. This is especially the case when a pool may be opened after a winter closure or other times when the pool may have had excessive use, or been contaminated by fine debris, causing the water to appear dull or possibly cloudy.

Today, the standard for quality of swimming pool water in the UK is set by the Pool Water Treatment Advisory Group (PWTAG) and the current standard for turbidity (clarity) published by them is 0.5 NTU (Nephelometric Turbidity Units). It is vital that this standard is adhered to at all times to ensure the health and safety of the bathers using the pool.

How should you ensure that the correct clarity is maintained? Firstly, look at the pool water, can you see the bottom clearly in the deepest area? Does the water look dull or cloudy? Beyond that; it is a good policy to regularly test the water turbidity as it is just as important as checking the pH and chemical levels. So it would be well worthwhile to invest in some

reliable and accurate test equipment. Today there are some excellent products available for testing pool water clarity and resolving any problems that may arise. If the water turbidity is outside the standard set by the PWTAG then a suitable flocculent is the most practical way to resolve the problem. But how well does the testing equipment and flocculent work? We decided to put it to the test.

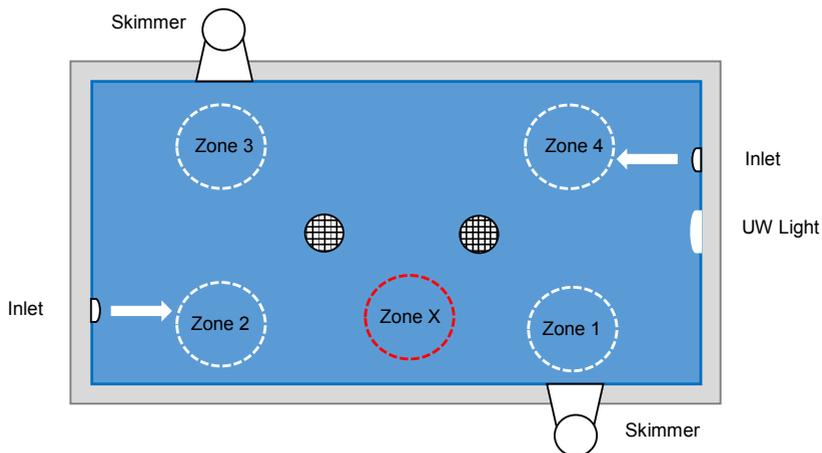
Plastipack Ltd. (see page 32 for more details) supply swimming pool cover material to around 40 countries worldwide, and have made a massive investment in testing their cover material products. They currently have five identical test swimming pools on site at their factory in St Leonards-on-Sea. Chris Carr, former President of the ISPE, approached Plastipack's Product Development Manager, Tim Fielder, who was only too happy to assist and he agreed to arrange for daily turbidity testing on two of their test pools.

For the test we decided to use a very popular flocculent used for swimming pool filtration, namely MSI's 'Jolly Gel'. Plastipack agreed to provide two of their test pools, no.4 (appearing visually good) & no.5 (appearing visually cloudy). To ensure our test results were accurate we enlisted the assistance of Colin Day, FISPE, Sales Manager of Lovibond Tintometer. As well as being an expert on water chemistry, Colin is also the current

Jolly Gel Turbidity Test

Start date of test: 30.05.19

Test Pool No: 5 Layout



Time of monitoring: 11.45am – 12.15pm

Pool water temperature:

Zone 1 = 22.2°C Zone 2 = 21.9°C Zone 3 = 21.8°C Zone 4 = 21.8°C

Total Dissolved Solids (TDS):

Zone 1 = 446ppm Zone 2 = 450ppm Zone 3 = 450ppm Zone 4 = 449ppm

Free Chlorine:

Zone 1 = 4.38 Zone 3 = 4.60

pH:

Zone 1 = 7.00 Zone 3 = 7.11

Turbidity Test using: T3 210

Calibration test result: 19.99NTU (Target: 20.00NTU) Outcome: Pass

Sample pool water tests:

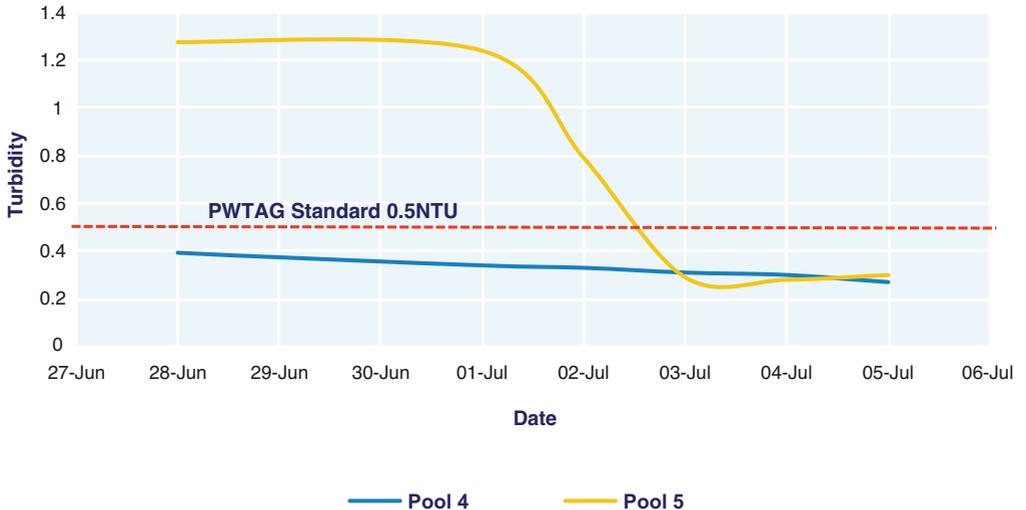
Zone 1 = 0.99NTU Zone 2 = 1.03NTU Zone X(a) = 1.23 Zone X(b) = 1.34

Tests Initiated by C Day FISPE current ISPE President. - Lovibond Tintometer.
Results verified by C Carr FISPE - CC Filtration Services on behalf of MSI International.

Jolly Gel Turbidity results

July 2019

Date	Pool 4 FC / PPM	Pool 4 Turbidity	Pool 4 Temperature / °C	Pool 5 FC / PPM	Pool 5 Turbidity	Pool 5 Temperature / °C
28-Jun	1.8	0.39	28	2.19	1.28	27.5
29-Jun		no data	weekend		no data	weekend
30-Jun		no data	weekend		no data	weekend
01-Jul	1.71	0.34	30	1.99	1.24	30.5
02-Jul		0.33	30		0.79	30.5
03-Jul	1.58	0.31	30.25	1.32	0.29	30.5
04-Jul		0.3	30.75		0.28	30.75
05-Jul	1.52	0.27	30.5	1.94	0.3	30.75



Tests Initiated by C Day FISPE current ISPE President. - Lovibond Tintometer.
 Results verified by C Carr FISPE - CC Filtration Services on behalf of MSI International.

President of the Institute of Swimming Pool Engineers. Colin brought along a brand new 'Tintometer' turbidity meter and gave some very useful on-site training to all involved. Colin went on to stress the importance of measuring the pH and chlorine levels at different areas around the pool, as, if they were not properly controlled, they could adversely affect the results. Additionally, Colin took turbidity test samples from several areas around the pool, and it became evident that the highest turbidity readings were from the deepest part of the pool, so it was agreed that this would be the best place to take samples for the ongoing tests.



Alex, Colin, Bob, Tim and Chris on site during the tests.

Flocculation and the improvement of turbidity levels is not instant and usually takes a few days to reach optimum levels, so it was agreed that Tim and his colleague Alex Beaver, a placement student from the Physics department at the University of Surrey, would monitor the turbidity levels on a daily basis and relay the results to Chris Carr for analysis. An important point to note is that for the flocculent to work at its optimum the water temperature should

ideally be over 20°C to ensure effective results.

The turbidity testing took place over a 5 day period and the results were impressive as you will see from the graph below. Whilst test pool no. 4 started out looking visually good with a turbidity reading of 0.4 NTU (being 0.1 NTU below the PWTAG Standard), even so Jolly Gel improved the water clarity by taking the level down to 0.27 NTU, which is well below the 0.5 NTU standard set by the PWTAG. Perhaps even more impressive was the results for pool no. 5, as this pool was initially in a very poor condition with a turbidity reading of 1.28 NTU. After just four days the turbidity level reduced to 0.28 NTU and although there was a slight rise at the end of 5 days it was still within the 0.5 NTU standard set by the PWTAG.

In fact if you take the standard of 0.5 NTU and rate it at 100% then the best results from the two pools was close to 50% better than the standard.

It is worth bearing in mind that these test pools are outdoor and can be affected by wind born pollution which we believe is the reason why there was a slight increase in the turbidity reading for pool no. 5. In any event, the results prove that the Jolly Gel flocculent works extremely well and is an excellent way to give your pool water that extra sparkle.

Product Profiles/Case Studies

We are happy to include these from any advertiser or ISPE Member.
Contact ross@ispe.co.uk

“The Life and Tales of William Hales” (Part 2)

The slightly edited second part of a series taken from the memoirs of former ISPE Vice-President, Bill Hales, Hon.FISPE, highlighting some of Bill's early days in, progress through and the development of the UK pool industry.

Fairly early on I had started to get interested in the pool shell construction, and most of our commercial pools were Gunited by the ‘Cement Gun Company’ run by Tony Wynn’s father, and often on his periodic visits to the office he would come into the drawing office and took the time to discuss with me the calculations that determined a structure. This was what got me started being interested in learning about the various structures.

I have just found a copy of one of my earlier drawings dated June 1962, 57 years ago, and it turns out to be a drawing covering standard concrete structures down to 6ft deep.

We built a number of large pools for the top schools, Radley College, Eton and others, one in particular was the pool for the famous girls’ school ‘Roedean’ near Brighton.

I had to go to site a few times, and had to expect some interesting comments shouted out of windows by the school’s pupils.

The pool was 25m long, and from memory was over ten feet deep to the point that Mr Wynn calculated that it needed two bond beams, one at the top and another half way down, and the Gunitite pool shell was only 2½ inches thick just below the top 12 inch bond beam, with the floor only about 6 inches thick.

I won a job some years later due to ‘Mr Milner White’ the President of the “Institute of British Landscape Architects” as mentioned in a previous article, involved with the outside pool project at Windsor Castle, also a job that we built in ‘Capt-en-tebe’ in the hills of Southern France. It was for a job in Woking not far from the Mayford Manor Hotel, the client had quite a few quotes and asked Mr White who was a friend of theirs to check them out, and he had called all of the companies quoting to meet him at the house to discuss the project. In the end he just said to the clients “Give it to Bill Hales”, and they did.



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Purley Pools.

After leaving Gilliam's, I started with Purley Pools on 4th November 1963, as their draughtsman, and in 1964, along with Trevor Baylis, and Peter Lister on sales, Allan Taylor as the technical director, John Glazier the managing director, and Mrs Edwards the Sales Director, we sold 320 pools, a mix of liner pools to schools and concrete pools, those mainly private. I wonder if this number and mix has been exceeded by many in the UK?

I was there to get the concrete pool sales going, but only in a design and advisory position, and to do the drawings and I was by far the youngest, having just turned 22.

A few years later, whilst still at Purley, I was given the chance, just by accident, to get involved with selling.

Peter Lister left as he had to go and run the family business in Greenwich. Peter was the person that got me involved in sales, as he was another person that found surveying and drawing just a little difficult, so I went out with him on some of his sales calls, to provide the back up. And between us we sold quite a few concrete swimming pool schemes at Purley Pools. As covered in a previous article Trevor Baylis could not draw much at all either.

I will cover just four of the clients that we dealt with at Purley.

We had only just completed building a pool in about 1964/5 for Freddie Mills, a famous World champion boxer just before he was found dead in his car. He was also a host on an early TV pop music show 'Six Five Special' with Jo Douglas and Pete Murray.

Another personality who was found dead, hanging in his garage, was the 'lawyer to the stars', David Jacobs. Amongst his clients were The Beatles' manager, Brian Epstein, Lord and Lady Robey, Lawrence Olivier and many other very famous names.

I had six meetings with David Jacobs, both at his home in Hove, Princess Crescent, and his office near Hyde Park, at about the time that he had let Ringo Starr use his house in Hove for his honeymoon in 1965, when he had just got married to Maureen (and Ringo would be a client of ours at Heritage many years later).

We had already built pools for John and Paul on St. Georges Hill whilst I was at Gilliam's. I went down to the house in Hove to measure up and to prepare drawings for an indoor pool scheme which he eventually gave me a verbal go ahead for.

Whilst at the house one day and waiting for David Jacobs to arrive, the housekeeper made me a coffee and I sat in the very large sun room, also sitting in the room was an elderly lady sitting on her own and she called me over. She turned out to be Lady Robey, the widow of Lord Robey who was a very famous music hall artist from way back in the 1930s. We chatted for about 15 minutes and then I went back outside to finish my survey.

David had still not turned up, so another cup of coffee was required, and back into the sun lounge. On the other side of the lounge was a grand piano and someone had been playing it for an hour or so already, and whilst drinking my coffee a soft Southern drawl was heard. "Say young fella,

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do you like music?" "Yes, I do", I replied. "Would you like me to play something for you, what would you like me to play?" "Do you know Rhapsody in Blue?" said I, as the person speaking was rapidly becoming clear to me.

"Contrary to general opinion I can play most things, come over here and listen" said Liberace. So Liberace played Rhapsody in Blue just for me, in many styles over about half an hour. And then David Jacobs turned up.

I went away, completed the designs, and then it all went quiet, until the news came out that he had either been murdered or had committed suicide.

It had been David Jacobs winning the Court case for Liberace against 'Casandra', a writer for The Daily Mirror, that had him saying "I laughed all the way to the bank".

Another job that I got but did not build at the time was for Dr Emil Savundra at the White House in the 'Bishops Avenue' Hampstead. I prepared all the drawings and then his world fell apart shortly after his famous interview with David Frost on TV in February 1967.

A year or so later we were contacted by the new owners who had my original drawings and they gave us the contract to build the pool, which we did.

Some years later I was given a contract by another, but far more infamous chap. Something at the time told me not to accept the contract, and I was proven right. The company that built it wished that they had not built it – big time.

And probably the largest project we dealt with at Purley, was for the 'White Fish Authority' up in Scotland, where we constructed a

number of enclose fish farm areas, involving constructing water tanks, some well over an acre in size, sunk into the water in easily accessible areas, so as to give large controlled secure fish farming areas.

By 1967 I was doing all the selling for concrete pools at 'Purley Pools' as Peter had left, and Trevor Baylis, most of the liner pool sales until Lionel Thomas joined us. He had been the editor of all the technical journals published by Robert Maxwell Publishing.

Lionel had left when a legal dispute broke out at Pergamon Press and he then joined Sam Gold at Cascade, but he didn't stay there long. He then came to Purley Pools and was put under my wing, as although he was a good salesman he knew very little about swimming pools.

Getting him up to speed should have been up to Trevor teaching the liner pool bit, but he was considered a bit of a loose cannon and had too much of a butterfly mind, which is why I had been asked to work with him so as to make sure we recorded his research, as covered in a previous ISPE article.

Lionel worked with me for quite a few months, and most days the highlight of the day was a good lunch and my introduction to 'CAMRA' real ale, rather than Keg beer.

The 2020 ISPE Student Exams

These will take place on
Monday 16th March, 2020
near Hemel Hempstead, Herts.
All registered students will receive a letter with booking form in mid-February. Places may only be reserved via the booking form.

Wilson's Travels (or lack of)

Recently I have spent more and more time contemplating retirement, not from writing, but from travelling.

To date this year I have taken twelve flights and have four more provisionally booked. I don't particularly enjoy flying and have only persevered with it until technology enables me to be emailed in micro-seconds to my destination. That technology however has now been stalled by that stupid insect in David Cronenberg's film, *The Fly* who accessed the teleportation booth with Jeff Goldblum with consequences that can only be described as beastly.

Worse than flying is the mind numbing performance in boarding aircraft due, in part, to the low life, Richard Reid, AKA the Shoe Bomber who, eighteen years ago, attempted to bring down an American Airlines aircraft with explosives hidden in his shoe. Because of this we now have to remove belts etc. and holding our trousers up with one hand, hop 'sans' shoes through a body scanner that then reacts to the metal zip on my wallet. To compound this, Sajid Badat from my home town, Gloucester also admitted trying to emulate Reid's action albeit unsuccessfully and has now turned 'supergrass'. All of this makes accessing aircrafts more arduous.

So in my working life, sorry in my consultant/lecturer's life, that cannot possibly be described as

work. The word 'work' is something that in my mind comprises physical effort so not a banner describing what I do. Others work whilst I simply talk about work.

I am often asked, where is the best place that I have ever 'worked' and I struggle with an answer. I loved the Falklands and Kazakhstan, but also the Emirates, Pakistan, India and Canada. I would have added Ciudad Juarez, Mexico to that list but as I worked there in 2013 and the local cartel had been responsible for more than 2,000 deaths the year before, I didn't go out much whilst there! Two regrets that I have is turning down work trips to China and the Dominican Republic. I was asked to go to the Dominican Republic, but the date clashed with my inaugural speech as ISPE President so I turned down the date believing the customer would reschedule. They didn't! I just hope you ISPE members appreciate how much the Presidents, past and present do for you.

China; I never went because it was not business class flights. How pretentious was that? But being 186cm AKA 6ft 1" and I was formerly 190cm AKA 6ft 2½", I struggle with leg room when travelling cattle class. As I said, I used to be taller but now appear to be shrinking faster than the pound, my waistline being the solitary exception. I have been offered Doha again but having worked there three times previously, I was more than grateful that my protégé

Steve Burke, MISPE, is going in my place.

Amongst the things that I would like to assist with before passing on my Lovibond testers to Steve (see picture below) is the implementation of independent investigations of water related deaths and/or incidents by experts without any bias towards hotels, water parks and holiday companies. There are people in our industry with leisure management and H&S qualifications that would fit this bill and with the major advantage of not being 75 years of age.



I will miss working with the delegates.

Yet another thing on my wish list is for a simplified version of BSEN1069 (2010) parts 1 & 2. This deals with waterslides yet appears to miss out essential features that consultants and designers need to know and quote.

So yes, I will continue to travel to these exotic locations and have a couple of these on the horizon. Recently I have been quoted as a world expert in water parks and pools by The Sun, The Mirror and The Daily Mail, all relating to cases of deaths, accidents and incidents in water features. My own feelings on this is there always seems to be a level of

contributory negligence by parents and guardians and much of this, I believe, is in part due to 'all-inclusive' holidays. Some of these adults seem to think they should be eating or drinking all of the time to get the best return for their holiday investment. Unfortunately, they blithely believe that their children become the sole responsibility of the lifeguards.

I have worked with some of these lifeguards abroad, whom I am convinced only took the job after watching a couple of episodes of Baywatch. This instantly converts them into 'babe magnets' and they are generally surrounded by young attractive members of the opposite sex vying for their attention and preventing them from their prime task of monitoring safety in the pool and water features.

I will never get tired of saying:
“UNTIL YOUR CHILDREN CAN SWIM AS WELL AS YOU, ACCOMPANY THEM INTO THE WATER!”

Regards to both my readers.

Allen J Wilson, FISPE

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Project Profile

Courtesy of London Swimming Pool Company

Minimalist Pool is a Sanctuary for Water Therapy, Exercise and Relaxation



Simplicity of design makes this luxury indoor pool stand out. The minimalist design of the semi level deck pool and the pool hall are simple in form with clean lines throughout. The pool floods with natural light from the surrounding French windows, skylights and a roof lantern that casts attractive shapes on the pool water. The pool and hall feature a monochromatic colour palette of subtle greys that create an inviting and tranquil atmosphere – a great place to swim and relax after an energetic session in the nearby home gym.

The swimming pool, which measures 12.2m by 3.5m and 1.3m deep, is finished in large format porcelain tiles, which help to create a luxurious feel. Installed at the far end of the pool is a HydroStar counter-current swim unit with a single turbine unit capable of delivering 160m³ per hour flow to swim against. This is an excellent addition to the pool as the current enables swimmers to enjoy either vigorous swimming training or therapeutic massage.

Complementing the pool is a separate six-seater spa designed and built by the LSPC team which is finished in the same porcelain tiles as the pool.



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A Bayrol Pool Manager Pro monitors water chemistry and ensures a measured dosage of sanitiser (sodium hypochlorite) and pH minus (sodium bisulphate) are injected into the swimming pool water via the plant room circulating pipework. There is also a Triogen UV system to assist with keeping the combined chlorine levels under control during heavy bather loads. These features are key to both the pool and spa, except the spa turnover which is around 15 minutes.

The pool is fitted with an Ocea Polycarbonate automatic pool cover and the spa is fitted with a bubble cover. When the swimming pool and spa covers are on, the air handling system will set back the room temperature from 28°C to

22°C (whilst keeping the pool water at 29°C) – this saves energy when the pool is not in use because of three factors:

- the pool hall is not trying to maintain 30°C with the cover on
- the water's ability to mix in the air (humidity) is reduced, saving energy from the pool water by keeping heat in the pool
- reduced humidity saves on chemical usage

Floor inlets deliver the filtered and heated water back into the pool and eventually over the weir edge (semi level deck at water level) which is just below the finished floor level. This weir allows for up to 100% of the circulated water to flow through the pool tank (bottom to top) giving optimum circulation through the tank. This slot is fitted to both sides of the pool in their entirety to maximise this flowing of the swimming pool water.

LSPC worked closely with the client to realise the bespoke tile layout pattern, ensuring lines flow through the pool and onto the surround as sympathetically as is possible, working into columns and window reveals and around floor grilles delivering warm air back into the room. Pool edge tiles were all measured on-site and fabricated off-site to allow the walkway to flow where stone meets water.

Contact Details

London Swimming Pool Company

Website:

www.londonswimmingpools.com

Telephone: 020 8605 1255

New Members and Students

We extend a very warm welcome to all those who have recently joined or re-joined the Institute. If you have a colleague who would like more information on the ISPE and its activities, please email ross@ispe.co.uk or telephone 01603 499959 for more details.

Bradley, A.	Swimlife UK
Beeby, S.	Golden Coast
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The ISPE Awards

The Institute has a number of awards, some of which are presented annually and others more occasionally. The 2019 ISPE Awards will be held as part of the Institute's 122nd One-Day Seminar near Hemel Hempstead, Hertfordshire on Thursday 10th October, 2019. (Places must be booked via the ISPE.)

At the annual 'Industry Gala Dinner and Awards', held after the first day of SPATEX 2020 (Tuesday 28th January) the ISPE has the opportunity to represent their annual awards so the recipients can take the acknowledgement from their peers on the wider industry stage (bookings via SPATA, www.spata.co.uk or 01264 356210).

Here we take a brief look at what's available and how it may be won.

The Gartside Cup for Student of the Year – Donated to the Institute by Joe Gartside in 1983. This is awarded to the student who achieves the highest overall result in their ISPE exams. The winners do not keep the cup but their name is engraved on it and they are presented with a replica to keep. Without giving any secrets away, for 2019 this will be shared between two students and each will have their own replica to keep.

The Jim Johnson Filtration Shield – Donated to the Institute by former ISPE President Jim Johnson on his retirement. This may be given for an excellent exam paper in the subject of Filtration or for a technical paper on that subject. This year a student will receive it for an excellent Filtration exam paper scoring a very impressive 95%.

The John Asher Cup - Donated to the Institute by former ISPE President and long-time Honorary Treasurer, John Asher, on his retirement from the ISPE Council. This may be awarded

for an excellent Construction exam paper and there will be a winner in 2019, someone who scored an impressive 86%.

In addition we have:

The Peter Horne Cup – Donated to the Institute by John Asher in memory of long-time Member, Peter Horne. Usually presented for an excellent Chemicals exam or an excellent technical paper on that subject. Not being awarded this year.

The Peter Littlehales Cup – Donated to the Institute by Lester Brown in memory of Peter Littlehales. This may be presented for an excellent technical paper or seminar presentation – not being awarded this year.



John Cheek presents the Peter Littlehales Cup to Allen Wilson in 2016 (Allen also won it in 2010).

The Allen Wilson Award - Donated by ISPE Past-President Allen Wilson for the Best Plant Room - not being awarded this year.

The Selwyn Mindel Award for Performance and Achievement - Donated by ISPE Past-President Selwyn Mindel. This is awarded for outstanding services to the Industry and to the Institute in particular. This will not be presented in 2019.



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February 2020 (date to be arranged)
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***This seminar is FREE to
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ISPE members (all other categories) £25
and non-members are welcome, too, at £30.

This seminar is aimed at those students about to sit their ISPE Student Exams in March and will include: tips and advice on where marks are won or lost, past papers, together with sample good and bad answers. There will be ample opportunity to ask questions.

The programme is as follows (all times, apart from start time, are approximate).

- 10.00 am Coffee on Arrival
- 10.30 am Welcome - Chris Carr, FISPE
- 10.35 am Filtration - Chris Carr, FISPE
- 11.20 am Questions/Discussion
- 11.30 am Construction - Ian Betts, FISPE
- 12.15 pm Questions and Open Forum
- 12.40 pm Light Lunch and Coffee
- 1.20 pm Chemicals and Water Treatment - Colin Day, FISPE
- 2.05 pm Questions
- 2.20 pm Heating - John Scott, FISPE
- 3.05 pm Questions and Open Forum
- 3.25 pm Close - Ian Betts, FISPE

***Places MUST be pre-booked. Register your interest NOW.
As soon as we have at least eight candidates we will set a date.
To book your place, please email ross@ispe.co.uk or tel. 01603 499959.***

More Model Answers

In the last issue of the ISPE Magazine we included the 'model answers' for Section A of the 2019 Construction exam paper. In this issue we look at Chemicals and Heating, with Filtration to follow in the next issue.

It is suggested that students spend as little as 15 minutes on Section A questions, answering all five questions (6 marks per question).

Chemicals

1a) Name one chemical you would use to raise Alkalinity.

b) Name one chemical you would use to lower Alkalinity. Do not use trade names.

Answer: To raise: sodium bicarbonate. To lower: sodium bisulphate (Dry Acid).

2. Pool Water constituent Concentrations are normally expressed in 'mg/l' or as 'ppm'. What do these terms mean?

Answer: mg/l = milligrams per litre. ppm = parts per million.

3. What is meant by the term 'balanced water'?

Answer: A water is said to be in balance when it is neither scale forming or corrosive. By measuring the following and putting readings into a formula the balanced water value can be calculated: pH, total alkalinity, calcium hardness, total dissolved solids (TDS) and temperature.

4. What is meant by the term 'free residual chlorine'? State how it should be measured.

Answer: The free residual chlorine is the chlorine remaining after some

has reacted with contaminants and waste material. It would normally be measured by using a DPD No1 tablet method and appropriate comparator / photometer system.

5a) State the acceptable pH range for a swimming pool.

b) Name one chemical you might use to raise the pH of a swimming pool.

c) Name one chemical you might use to lower the pH of a swimming pool.

Answer: pH range 7.2 – 7.4 (would also accept 7.2 – 7.8). To raise pH: sodium carbonate (soda ash). To lower pH: sodium bisulphate (dry acid).

For information, we would not accept pH+ or pH- as suitable answers.

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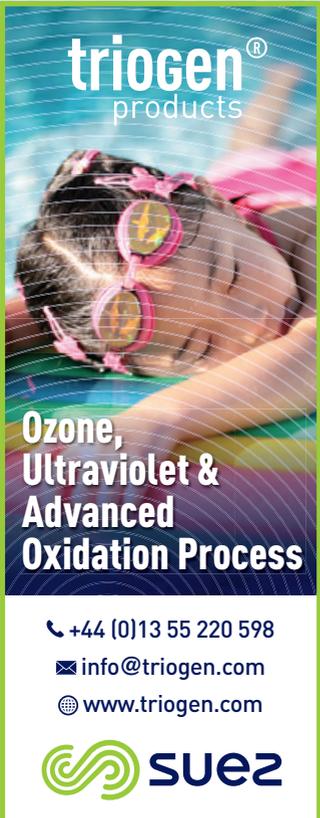
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Heating

1. Additional “make-up” water is often required in swimming pools. List three ways through which water loss normally occurs.

Answer: The requirement for make-up water from pools will vary significantly between indoor and outdoor pools and whether or not a cover is used.

The three primary means of water loss are: a) Through evaporation, especially if no pool cover is used or if the pool is outdoors. b) Through splashing and the water removed on the bodies of each bather. c) Through backwashing and other water losses during maintenance and cleansing.



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(The loss that we prefer to not admit would be leaks!)

2. A rectangular pool measures 9m x 4.5m with a sloping floor 1m to 2m. Calculate the pool's capacity in litres.

Answer: The pool volume can be calculated as the surface area multiplied by the average pool depth. We thus have an area of 9m x 4.5m = 40.5m².

And an average depth of (1m + 2m)/2 = 1.5m average depth. Area x average depth = 40.5m² x 1.5m depth = 60.75 M³.

Since 1m³ = 1000 litres then the pool capacity is 60.75 x 1000 = 60,750 litres.

3. An electric heater has a rated output of 15 kW. Which of the following is the imperial equivalent of this output?

a) 51,200 BTU/hr b) 15,000 BTU/hr
c) 512,000 BTU/hr?

Answer: A heater capacity 100,000BTU are approximately equal to 30kw. More accurately 1kw = 3412 BTU/hr.

A 15kw heater therefore equates to approximately 50,000BTU/hr So answer A, 51,200 BTU/hr is the closest capacity to 15kW.

4. What is the single most important point to recommend to a customer who is considering a heated outdoor pool that will minimise the running cost?

Answer: When considering the running costs of a heated outdoor pool the loss of heat and the means of replenishing it will be the most important factors.

Assuming that the most effective means of heating is chosen then it will be important to reduce the heat loss from the pool. It can be shown that

the heat loss through evaporation at the surface will be around 70% of all heat loss from an outdoor pool so the installation of a good quality cover will be the first recommendation.

5. What are the methods of heat loss from an outdoor swimming pool?
 Answer: The methods by which heat is lost from an outdoor swimming pool are

- a) Evaporation from the surface
 - a. This is increased on windy days when the cover is removed
 - b. It will also increase when the water is warmer or the weather is colder.
- b) Radiated losses from the surface of the pool to the black overnight sky.

- c) Convected heat losses from the warm pool surface to the cooler air immediately above it.
- d) Heat losses to the ground
 - a. These will increase if the pool is not insulated
 - b. These will increase if the ground surrounding the pool has a high water table
 - c. Moving high water tables will increase the losses still further
- e) Splashing of heated water to adjacent surrounds and drains
- f) Back washing of the filters and any other maintenance processes that result in water loss and cold water make up.



Situations Vacant

The adverts below are summaries of the full adverts which appear on the ISPE website (www.ispe.co.uk) under Situations Vacant. See the website for details or call:

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Guncast

1) Pools & wellness Service &

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Administrator

2) Thermal Cabin & Spa Engineer

3) Swimming Pool Engineer

South-East & Central London.

End Notes

Plastipack Thanks

On pages 12-15 we feature a Case Study of 'Jolly Gel' from MSI. The testing referred to in that article was made possible by kind permission of Plastipack Ltd. who agreed to let Chris Carr use two of their test pools. Chris Carr added:

"Here in the UK we are fortunate to have the largest and most successful swimming pool cover material manufacturers based down in sunny Sussex, namely Plastipack Ltd. The Institute of Swimming Pool Engineers has a very good relationship with Plastipack as they host the ISPE Filtration Workshop run by Chris Carr, Phil Barlow & Kim Mumford each year in November. Many thanks to Peter Adlington, FISPE and all those who assisted with the testing, and of course for hosting the ISPE Filtration workshops".

Next Issue

The next ISPE Magazine will be out just before SPATEX 2020 towards the end of January. We are always asking for Product Profiles, Case Studies, Company News, Technical articles or anything you would like to place before 800 or so ISPE Members. Let us have your items **before Christmas**, please. Email to ross@ispe.co.uk and, space permitting, we'll get them in print.

New ISPE Office Hours

Monday to Thursday 9.00 am-5.00 pm. Friday 9.00 am - 1.00 pm. Calls & emails received on Fridays after 1.00 pm will be answered on Monday morning.

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Full speed at start of season for fast heating. Then Slower speeds once pool water is near to set temperature. Resulting in slower speed operation and reduced running costs for rest of the season!



7 years warranty on compressor

2 years parts warranty



Operates at air -7°C below zero

Maximise your pool season with heating capabilities at Air Temp down to -7°C



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