

FABWORLD



**A VIEW OF THE STEEL INDUSTRY
THROUGH THE EYES OF STEEL
INDUSTRY LEADERS**

www.schsiteservices.co.uk





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WELCOME to our first **FABWORLD** edition.

Hi, I'm Gary Finley, Managing Director of SCH Site Services. SCH is a family owned business based in Newton Aycliffe providing fabrication and installation of structural steelwork to the nation.

Publishing a magazine dedicated to steelwork and fabrication has long been an aspiration of mine. Covid-19 lockdown 1 provided me with more time on my hands than usual. With nearly all of my directorship roles diminished during this time, I found that my only duty was to walk the dog. So I set about developing the ideas of Fabworld and put them into motion.

I believe that there is a place in the world for a magazine dedicated to the subject area of fabrication and steelwork. God knows, there are enough magazines for cars, beauty, fishing, food, horse, football, and everything in-between. I hope that those for whom fabrication and steelwork is a central part of their lives will share this belief, enjoy this issue, and perhaps even contribute to future issues.

My intention is to talk honestly and openly about the fabrication and steel industry. I want to raise points that people rarely raise and bring a community of people together. This first edition is more focussed on my own company SCH, but it is my intention to involve the wider community in following issues.

I begin with the major points tackled during these uncertain times.

The volume of invitations to tender we are receiving is still quite high, which is a great positive, the tender level at which we are losing them is not. This is where great management and efficient business models will thrive moving forward. There will be a trail of wreckage for those that do not adapt.

Trade Credit Insurance is a real safety net in an industry which turns over billions each year and can also turn on a sixpence. Many well known construction companies with huge turnovers went into administration during 2019, amongst them companies like Bardsley, Simon's and Clugston and Construction Partnership UK all of which we have tendered for in the past.

Others have now declared huge losses and are selling off assets or reducing the size of their operations. Some look to be managing risks by concentrating on what they know and what they are good at.

We only partner with companies for whom we can get Trade Credit Insurance cover. This 'paid for protection' has proved to be a vital part of screening our clients prior to going into contract with them. Over the past year many of the companies which we couldn't get coverage for have unfortunately gone into administration. Fortunately, we dodged the bullets, but there have been other subcontractors who have not done their due diligence and who have been forced into administration as a direct result.

Another major issue is that many of our clients have had their Trade Credit Insurance cover reduced or removed completely by the underwriters. This has put more emphasis on upfront client and project analysis prior to submission of our tenders. On the back of this, the insurance premiums are increasing meaning that you get less coverage for your money than you used to.

The government is committed to supporting the Trade Credit Insurance market with a £10bn state guarantee. The government's new Trade Credit Reinsurance scheme, which will apply until the end of the year, will see the vast majority of trade credit insurance coverage maintained across the country.

Professional indemnity insurance has also taken a hit this year, where the brokers are finding it very difficult to offer the levels required or match the levels that have been on offer in the past.

This insurance covers legal costs and expenses incurred in the company's defence, as well as any damages or costs that may be awarded if you are alleged to have provided inadequate advice, services or designs that cause your client to lose money.

Our own level of insurance has been reduced from 5 million covering each claim to 2 million in the aggregate which will have some impact on which projects we can tender for. We do maintain regular contact with our Broker to ensure when higher limits are available at an affordable premium on a per contract or annual basis, we will be ready to buy.

It is a difficult market for everyone and each one of the business leaders within the sector has some big decisions to make over the next 6-12 months to ensure that we continue to look after and reward the skills within the industry.

Have there been any positives in 2020?

The last 6 months have provided the business with an opportunity to reflect and review the way in which we operate. We have improved our business by investing in the ISO45001 integrated system.

To guide us through the system we enlisted Guthrie and Craig who we found to be excellent at project managing us through the ISO process.

We have also had an opportunity to review our business strategy during this time. We have received a great deal of help from RTC North which came with a well-received grant to subsidise the cost of employing the incredible skills of RTC. Jon Symonds and Jim Barr have provided real insight into what is possible for us moving forward.

Through "Scale up" Jon delivered a full review of our business and guided us through a plan for growth. During the discussion Jon really challenged us and dug deep into how the company operates and what we could improve upon to grow.

The supply chain North East programme headed up by Jim offered us a business diagnostic for the new product "the BAP". It created a business model canvas to document the value proposition of the BAP product.

These plans will be rolled out over the next 12 months and we are confident that these initiatives will make a real difference to SCH Site Services.

Hopefully as you read through this magazine you will read how we are setting the bar within the industry for Health and safety.

I also got to spend more time with the dog ;)

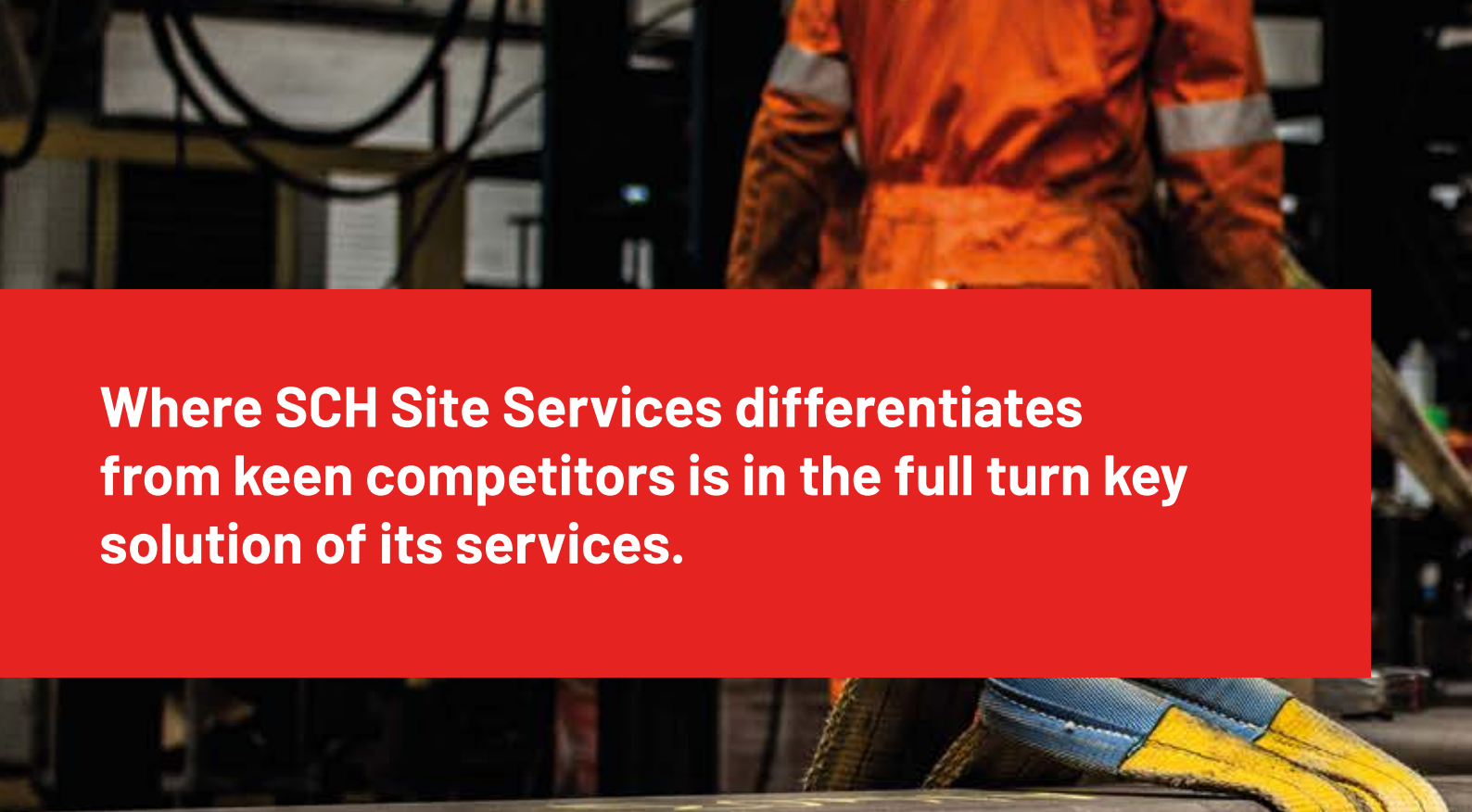
Gary Finley

Managing Director of SCH Site Services

FACT:

We can fabricate and paint up to 100 Ton of structural steelwork each week in our very own facility. SCH Site Services are proving to be innovators in an industry that struggles to change it's way of operating.





Where SCH Site Services differentiates from keen competitors is in the full turn key solution of its services.



Operation Director and creator of the new lifting device, Andy Braid confidently states "Once we have completed all of the preparation and the device is ready for the market, we believe that this new product will be a game-changer in the industry."

The BAP The problem!

Moving large steel structures onto the site has provided problems for the steel industry since the industry began. There is a 3 pronged issue with the current lifting practices which encompass health and safety; product damage and time.

Current practices require chain or sling wrapping which grapples the steel members and lifts them into position ready for construction.

Traditionally the slinger would wrap or double wrap a chain/sling around the centre of the member in order to horizontally lift the section into position. The slinger would rely on their experience and judgement to determine the centre of gravity and friction of the member and as such the 'bite' of the chains/slugs. The weather has a major impact on the chain/sling biting into the steel.

The BAP will minimise and even remove the potential of serious injury and loss of life during lifting sequences. Secondary outcomes and real everyday issues which the BAP will eliminate are loads being lost and damage being made to the paintwork or treatment protection of the steel hollows. All which cause a loss of time or further remedial work whilst also improving health and safety during lifting. Because of current practices, there are no guarantees for the loss of time, money or wellbeing. Current best practice only minimises the big three issues.

What is it?

SCH takes health and safety very seriously and strives to remove risk at any opportunity. Through an innovative approach to health and safety, the BAP (Braid Anchor Point) concept was created and is aptly named after the inventor of the system.

SCH Site services have worked with Andy Braid to progress his idea to production. The idea is a way of offering the industry a safe procedure of lifting steel hollow sections when erecting a steel frame building.

The device is fitted during the fabrication stages. You can barely see the device once fitted and the only difference to the steel hollow section on show is the base of the anchor point, the size of a £2 coin, which is attached to the bottom of each member.



**Andy Braid, Director of SCH Site Services explains:
“It’s about safe lifting operations because safety is
our main aim.”**

How does it solve the problem?

The product gives SCH a safe way to lift steelwork during the erection process of a building. As well as the advantages of providing extra safety measures, it is also believed that the product will be cost-neutral.

There will be no need for repairs to hollow section paintwork because no chains have been wrapped around the section. This process will reduce the install time of all hollow sections by 50% and will guarantee 0% repainting cost due to erection damage.

Andy Braid, Director of SCH Site Services explained: “It’s about safe lifting operations because safety is our main aim.”

What does success look like?

We have used our Braid Anchor Point (BAP) on two recent projects in the last six months. The first was to fabricate, paint and erect 16 height restrictors direct for PD Ports at the heart of Teesside.

This was the ideal small project with a client that we have worked alongside in the past and have a great relationship with.

The columns were circular hollow sections (CHS) 323mm in diameter and weighing around 1.5 ton each. Our standard design BAP can lift a maximum of 2.5 ton and is limited by the capacity of the anchor point.

The black and yellow striped paintwork on the steel had to be perfect when handed over and the team were conscious that they had to be particularly careful. The BAP performed well, ensuring the paintwork was not marked in the installation of the steelwork.

We found that the process saves substantially on time and costs. For our first trials of the BAP we felt it was a great success and wanted to include it on the next job which was a much bigger project. Please see the Gibside article on page 10 to find out more about the following project the BAP was used on.

What happens next?

The BAP system will be rolled out to the wider community over the coming months. In the meantime, SCH continues the development of the concept and proving the initial theory of saving time and increasing levels of health and safety on live projects.

For now, only SCH clients will benefit from the BAP system. Once the concept has been proven, it will be revealed to the construction world and for the good of health and safety for all.

Compass Systems

Compass Systems is an American Company who builds aluminium scrap recovery systems for various industries including the automotive sector. The business was incorporated in 1998 by the CEO Robert Sherrod in Ohio. Bob is an engineer who believed that he could engineer and build a better product more efficiently and so he created the company 'Compass Systems'.

Compass had approached a well known car manufacturer in Sunderland to offer them a solution to the scrap aluminium issues they were facing within the car manufacturing plant at Sunderland. The Compass Cyclone System efficiently packs the scrap aluminium into bails ready to be recycled.

Compass was looking for a UK partner to help deliver the first UK sale of their system. SCH has been working at the plant in Sunderland delivering a wide range of steelwork packages for a major client.

Because of past successes on the car plant site, SCH was named as a possible UK contractor to help them deliver on the steel and fabrication of the Compass Systems project. SCH offered a full turnkey solution for the building which houses the Cyclone.

This included everything from the design through to landscaping which includes...

Full design of all primary and secondary steelwork

Supply and Installation of all primary and secondary steelwork including the metal deck open mesh flooring, hand railing and safety guarding.

Supply and installation of the cladding through SCH's sub-contract supply chain

Installation of all fire doors.

Design and installation of all lifting beams including certification.

Installation of all plant and equipment which was imported directly from Compass Systems.

Site assembly and welding of all plant components to build the cyclone.

The positioning of all mechanical, electrical components and control units.

Supply and application of soundproofing surface treatment.

Landscaping of grassed areas once the build was completed.

SCH received the tender information directly from Compass Systems which was for a previous project they had completed in Chicago. This provided a good insight into what would be involved within the project here in the UK. During the tender process, Bob Sherrod and the Project Manager Robert J. Lewis flew in from Ohio to meet client's project team and SCH respectively.

SCH Managing Director Gary Finley recounts the first interaction vividly... **"The relationship got off to a good start. I don't think they liked the coffee or the weather but Bob and Robert were impressed enough at what they had seen on that cold and wet Autumn morning following their tour of our facility.**

As part of our presentation we gave them a glimpse at the complex and difficult structures we had built over the years and they appeared confident that we could help them".

Over the course of the next 12 months, SCH shared their BIM modelling software, helping design and model a suitable solution which was fit for purpose and within budget. Compass Systems were delighted with the planning of the project and commissioned SCH to start.

SCH began manufacturing the steelwork in their facility. They were determined to prove their credentials and show exactly what they could do. SCH cleared the first hurdle with complete accuracy by ensuring the deliveries went to site on time and in full. The steel structures fit without error and the finish and quality of the structure were exemplary.

The lower levels of the structure were coated in the end users colour scheme and the exposed roof level steelwork was galvanised, as was all of the open mesh floorings. The structure progressed up through the levels and the Cyclone equipment, commissioned by Compass Systems, was installed piece by piece. The flooring surrounding the kit was secured into place by the SCH team.

The cladding was installed to the steelwork by Chemplas once the structure had reached the external roof level.

As part of the works package, SCH secured the mechanical and electrical parts for the Cyclone. This included the full design of the lifting beams which were fully certified.

The project overall was a success having the full system delivered on time and within budget which exceeded Compass's expectations. Compass were delighted with the performance of SCH and as the business continues to develop, Compass intends to utilise SCH on future projects in the UK.

How did a UK based fabrications and steel company compare to their American counterparts?

Robert J Lewis said, "SCH have delivered a premium product with premium service. Compared to our American fabricators? Us Americans are pretty good with steel and SCH meets all the same criteria. As for the installation, well they exceeded expectations in this area."

Are there more systems to be installed in the UK?

"Compass is actively seeking other business in the UK and surrounding European Countries".

How is the landscape of business in the States for Compass?

"Compass continues to design and supply equipment in the USA on a steady basis and we are actively pursuing additional work to add to our business".

How has COVID 19 affected Compass?

"As for Compass and the effects of COVID 19, we have been affected just like many other businesses have. We are making the most of everything and identifying ways to continue to do business while following all the government guidelines to be compliant".



1) Gibside School

SCH Site Services were awarded the 150 ton structural steelwork package at Gibside School in Gateshead. Wates Construction is the main contractor building the new SEN school as part of the SCAPE framework, a public sector group initiative that aims to improve UK infrastructure. The project began on site late 2019 with steelwork being transported to the site at the end of February 2020. The new build will now house 170 students.

SCH was asked by Wates to provide something special on this project that is unique within the industry.

The structure has a large proportion of hollow sections used both in the roof and side elevations. It was another opportunity to showcase the BAP lifting device to a large national main contractor. SCH has built great relationships with Wates having worked on the Hitachi project and the BAE System works. Both turned out with stunning effects.



2) Tombola

Sunderland-based construction firm Brims lead the £7m contract for Tombola HQ at the heart of Sunderland city which added 80 new jobs to an already impressive 300 plus workforce.

SCH Site Services was awarded a 210 ton contract to fabricate and erect the steel frame for the development.

The firm's futuristic HQ was designed by Newcastle-based Ryder Architecture, with the intention of creating a riverside campus which blends both old and new buildings.

The complex, a contemporary twist on a bonded warehouse design, enabled Tombola to increase its workforce in Sunderland to almost 400 people.

The exposed steel frame has been aesthetically detailed to a high standard rarely seen on commercial projects, with the additional integration of heating and cooling being cast in with the exposed concrete slabs. Great care was taken through significant collaboration with SCH Site Services to ensure that all the elements worked seamlessly together. The steel frame is braced but also has moment frames, set-back columns on the northern edge to create the dramatic building overhang and cantilevers to form the full-height glazed eastern façade.

Overall the building could not have been delivered in its amazing form without using a steel-framed superstructure which was installed by SCH Site Services. It has created a stylish and laid-back working environment that is completely in harmony with a culture of modern informality and flexibility.

3) Mandale Construction

180 ton Project

This project challenged our project management team due to some very challenging conditions on site and with precise tolerances within key elements of the build.

- City centre location and restraints
- Concrete tolerances differ greatly from Steelwork tolerances
- Roof glass tolerances differ greatly from Steelwork tolerances.

This project was a refurbishment of an existing post office in the centre of Stockport. The existing external structure remained and the inside floors were demolished. SCH installed all of the steelwork to the inside of the building to create new floors and an atrium on the roof. The full structure was surveyed ensuring the steelwork fit the 1960's concrete structure and all its imperfections.

This project required a lot of site modification works to fix the steelwork to the remaining existing concrete and masonry external structure. This type of project is where SCH really excels.

The steelwork was fabricated at the SCH facility, one floor at a time and then delivered to site. The Atrium, weighing 50te, was covered with glass and is the centerpiece of the building which created a light space through the core of the building. The results are truly stunning.

4) MACQ - Sunderland Brims Construction Limited



You can see the large box girder beam being lifted into place on SCH's YouTube channel

SCH won the prestigious structural steelwork package through the main Contractor, Brims Construction Limited. SCH have worked with Brims on other projects in Sunderland and beyond with great success.

The award winning Architect Flanagan Lawrence is behind the design and the structural design was carried out by structural engineer JC Consulting. Following approval of the structural design, the execution class two steelwork commenced manufacture at SCH headquarters on Newton Aycliffe Business Park.

It was painted in our purpose built paint facility and delivered to site. The steelwork began to go to site in February 2020 and was completed within the five weeks agreed.

SCH provided the 250 ton steel structure along with the secondary steelwork such as open mesh flooring and lifting beams.

At basement level, a fully fabricated plate girder box beam, weighing 6 ton, was installed with the use of several new lifting devices, "the BAP". This ensured that the box beam was lifted safely and the painted steelwork was not damaged during the installation.

To the front of the building, large fully butt welded dog leg RHS columns were erected to take the weight of the glass envelope above the front entrance.

At the front stage of the auditorium and in the roof are fabricated steel trusses which create the open space below for the retractable seating area.

We think the building will create an excellent local focal point once complete.

Graeme peacock Photography and provide by JC Consulting.



5) City Electrical Factors (CEF) Headquarters



This project is very much an SCH type project. More difficult than a standard new build structure of which SCH aims to win and deliver.

The structure was designed using a combination of steelwork, Finnish designed in Finland Slim Floor DELTABEAM, concrete and glass which required a huge amount of coordination at the early part of the project with other trade subcontractors to ensure the build was pulled together efficiently.

Our steelwork was to provide support for the glazed roof, office pods, plant deck, and the external glass canopy with a combination of primed and galvanised steelwork.

The finish of this project is very high aesthetically, a one which the end-user would be proud of.

The project was circa 150 ton with various surface treatment systems to deal with the different elements of the building and its use.

The steelwork was erected on a tight and difficult site with several level changes and trenches which made planning the on-site build a tough task.

With the SCH project management team, the build was completed expertly. With great planning, comes great outcomes.





FACT:

All our cranes meet the latest European emission standards.

Hippos weigh from 1,500 kg to 3,200 kg. Our 40t crane can lift 26 Hippos at minimum weight, 17 Hippos at average weight, or 12 of the heaviest hippos.



The only thing worse than training your employees and having them leave is not training them and having them stay."

Henry Ford

SCH Site Services have been investing in their workforce. The organisation has been able to successfully grow its capacity within the marketplace and this requires good quality steel workers. There has been a real battle with bringing in the right skills because of a skills gap within the industry in the UK.

To overcome this, the organisation has been prioritising apprenticeships and similar schemes to try and develop skills in steel erection and fabrication which have not been adequately cultivated elsewhere. This has allowed for the firm to balance both older and younger labour for the success of today, tomorrow, and moving into the coming years.

SCH Site Services are proud investors in employees giving them support, time and financial backing in order for them to upskill themselves to become more independent workers.

Developing knowledge and experience is a necessity, as is gaining a well-rounded understanding of health and safety on-site and off-site. SCH currently have two apprentices working through their NVQ level 3.

Two more staff members have now completed their NVQ level 3, one in Business and the other in Fabrication and Welding. SCH has 2 more trainees working through their City and Guilds for Welding and Fabrication.

It doesn't stop at the practical side, SCH has 2 office based employees who have changed their careers and joined SCH. Mike from a national PC supplier has joined the estimating department and Mathew is from a Computer Science background has joined the contract department.

These keen learners are between 20-45 years old and are completing their qualifications to ensure they progress their skillset and can work on construction sites throughout the UK. The site based operatives are part of the CSCS scheme which assess the competencies of all construction site workforce.

There are certain qualities which make people stand out from the rest. As an employer, you have to be available for all of your staff and invest time and effort into people. SCH provide a list of do's and don'ts for the company and employees

Do's

- Take advice and remember to use it.
- Turn up early each day with a positive attitude.
- Try your best.
- Let people know if you need help.

Do Not's

- Don't be shy, ask plenty of questions and ensure you use the answers.
- Don't just wait until you are asked to do something else, go and ask for something else to do.
- Don't sit on social media all day.

Do's & Don't from a company perspective

Do's

- Make them feel welcome, wanted and part of the team.
- Be patient and don't confuse new starters with industry jargon. Start from zero.
- Clear and precise communication with the learner will benefit them. Be open to further questions.
- Share aims and goals with the apprentice and review the progress often.
- Don't have high expectations of their abilities. (Remain realistic in where they are in their career)
- Show them the ropes with regard to being an "employee" as opposed to a "student"
- Consider their mentor, are they a good fit?

Don't's

- Leave it too long to review what they have been tasked with. Same day feedback.
- Openly criticise the learner.
- Expect jobs to be completed as fast as the experienced workforce.
- Ignore ideas that the learner generates. They may have a world changing idea.
- Expect "the finished product". There is a long way to go.
- Measure an apprentice against the expectations of a fully qualified member of staff.

Solving Legacy Problems In The Fabrication World

Welding fume is a complex problem within the health and safety of welding professionals. With a variable mixture of volatile gases and particulates being produced during the welding processes, there are wide-ranging health and safety issues to consider.

Following scientific evidence from the International Agency for Research on Cancer (IARC), the HSE issued a safety alert to inform the industry of a change in relation to the exposure of welding fume including that from mild steel welding.

Short-term exposure can result in nausea and dizziness with common complaints of eye, nose and throat irritation.

Being exposed to these fumes regularly and over a length of time can have some real long term and life-threatening effects such as lung cancer, or some evidence links it to kidney cancer. So this is a real issue and something that needs to be reviewed within each working environment within the industry.

Government policy states that suitable local exhaust ventilation equipment (LEV) or respiratory protective equipment (RPE) is used during any welding work being carried out indoors and outdoors.

SCH Site Services has taken this guidance seriously and have introduced further protective measures for its workers. The measures also protect the non-welding staff who work in the factory and on-site.

The protective measure which has been in place at SCH for several years now has again been improved upon. The company has invested in new Local Exhaust Ventilation (LEV) equipment which removes the fumes at source during the welding process.

This method uses suction, like a vacuum attached to the welding torch, removing the fumes from the weld area. This filters the fumes through a unit which is housed next to the welding power unit.

To ensure that the protection in place continues to do its job, air sampling tests are carried out by professional contractors who place special air samplers on the workers and throughout the factory.

Steve Dunn, SCH Site Services Production Manager states, "Our staff and their health and wellbeing is of paramount importance to the company and we are constantly looking at improving their procedures".





What can we expect in the industry over the next 6 months?

With another full lockdown looming over us all in the UK, we need to have some confidence that the end-users of the structures for which the steel industry builds will press ahead with planned projects so that construction continues to move forward. For some of the larger companies, it has been business as usual since June as there were contracts already in place and many having to have the completion date delayed which in turn, has a knock-on effect to the next project.

The industry has continued to build the projects that were already in motion before the pandemic hit. What we really need to see is that work continues to come in over the next 6-12 months and that will be dictated by the confidence of the end-user.

The government has made the decision that construction continues throughout this second lockdown which has provided the industry with some confidence. The next confidence boost is that there are a number of vaccines coming to the table for Covid19. Stock markets are beginning to rise based on these confidences. We know there is still a way to go, but any good news right now is very good news indeed.

What can we expect from the next issue?

We are going to have other fabricators involved, we will be catching up with RTC North East on what's next for them and how they can help your business to grow and improve. We will discuss the introduction of NSSS 7th edition and how this requires BS EN ISO 3834-1:2005 to 5:2005 (5 Parts)

ISO 3834 which is the international standard for quality requirements for the fusion welding of metallic materials. We will also be hearing from Mike Dowson who will be giving us his story on his time at SCH over the past 4 years and his experiences as a Trainee Estimator.

There will also be a review of the BAP and the progress SCH are making with that and we will also be asking an authority in health and safety what is happening across the globe within the industry.

Final Thoughts

I am very proud of the successes that we have had in recent years. We have a large number of employees who have been with us for a long time and have helped to shape the future of the business through our training and improvement programs.

I am also really excited to launch this magazine which will have a publication every 6 months. If you would like to get involved or have a news story for us, please get in touch. The next issue will be released in April 2021. I believe there is a space for a Fabrication and steel magazine in the world of the 2020s. Steel & fabrication is the love of many people now and in the future.

We have an excellent team here at SCH and we look forward to welcoming new members to the team in the near future. Can I also thank Pixel Media Design Limited for making this magazine happen? They have been instrumental!

Gary Finley

Director - SCH Site Services



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