LEAN Times

Monthly Update of JEG Lean Information

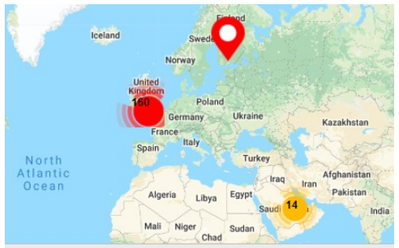
Issue 72
February 2019

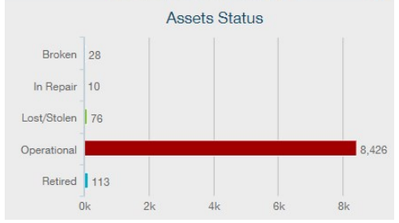
New e-zine this month

LCi Corporate Membership Acknowledgement
New Electrical options power us into the future
Inspector Gadget - Paul Lynch Shows us How

QSP 12 Control of Plant

QSP 12 relates to the control of plant and equipment owned by all the companies in Jones Engineering. With 8426 operational items of plant and equipment spread out over 175 active jobsites it is vital that these are controlled in a co-ordinated manner in order to keep all projects functioning to plan.





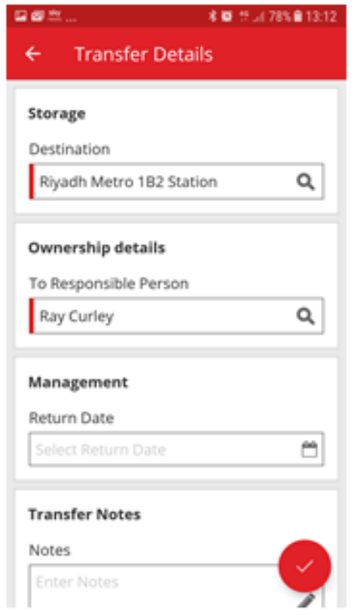
The following are the key points of QSP 12 and relate to all plant and equipment owned by Jones Engineering companies including, ladders, bending machines, welding plants, orbital equipment, site vehicles, site stores, site offices, drills, MEWPs, test equipment and tool boxes:

- To ensure that all company owned plant items are scheduled, in a known location and in a known state of repair.
- Site Plant Managers are responsible for the effective operating of this procedure. The Supervision on each site is responsible for the care of all plant items on that site.
- The Group Plant Manager is responsible for monitoring all plant on all sites
- Responsible Employees, (person that plant is assigned to), and Site Plant Managers are responsible for recording all plant movements, transfers, certificates and repairs.
- Plant Co-ordinators have full authority to take plant not being used on sites back to Coolquay, Collinstown, Little Island for Cork projects and Riyadh Village Compound for Saudi projects.
- Plant Register is located on the Hilti On!Track system.
- All Plant Transfers to be carried out using the Hilti On!Track system.
- Certification and Services to be recorded on the Hilti On!Track system.
- The Group Plant manager is responsible for the maintenance of the Plant Register, held on the Hilti On!Track system of all items of plant and equipment owned by the company.

All movements of plant, whether from stores to site, site to stores, or site to site, must be recorded on the Hilti On!Track system showing:

- Destination
- Responsible Employee (Recipient)
- Return date (if required)
- Any relevant notes

For more information, contact the Jones Engineering Plant Dept.



GOT A STORY TO TELL? …….WELL, WHAT'S THE STORY BUD?

If anyone has information or news they want to share regarding innovations or Lean Principles on their site, or maybe you have an article or story you want to share. Please feel free to contact the LEAN Development Group at the email address below and we will be delighted to help.

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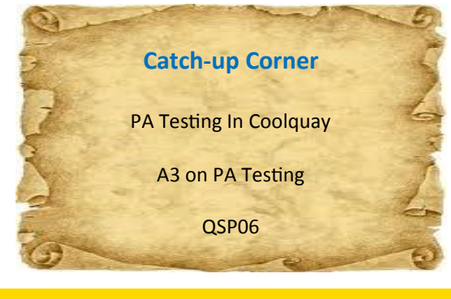
Charging into the future

Jones Engineering has taken delivery of it's first Electric Vehicle. By choosing the 2019 Citroen Berlingo we are helping to reduce harmful air pollution from exhaust emissions. Electric Vehicles produce zero exhaust emissions, so they have no adverse effect on the environment, which is in line with our company's commitment to helping lower greenhouse gas emissions. Jones Engineering uses rechargeable, battery operated plant and power tools wherever possible so electric vehicles were also a natural progression. The Berlingo has a load volume of 3.7m³ which is the same as the equivalent petrol or diesel models and can take a payload of 636kg. The fuel consumption costs are reduced by 80% and service costs are between 30% - 40% less. Electric vehicles are ideal for site based work transporters as the need to travel to service stations for refuelling is eliminated, saving time and expense. Charging can take place from any 3 pin socket and the running costs are a fraction of their fossil fuel equivalents.

"This is the modern world, so try to keep up with the Joneses."



"On behalf of the Board of Lean Construction Ireland (LCi) I would like to take the opportunity to thank you for becoming a corporate member of the LCi.

As a corporate member you have become part of a national community of leading Irish companies and organisations who are not just demonstrating their support for the LCi and its vision and objectives, but also demonstrating a commitment to deliver capital programmes and projects differently by adopting Lean thinking and practices.

Lean Construction Ireland is a voluntary not-for-profit organisation and the support of our corporate members enables us to put in place the necessary resources to operate and function in the required manner. In particular to deliver on our commitment of providing free and open information and knowledge exchange on Lean thinking and practices which we do through our website, our webinars, our annual *Book of Cases* and the various regional events held throughout the country.

Thank you again for becoming a corporate member and for your support to Lean Construction Ireland."

We believe the value the construction sector brings to the Irish economy can be significantly increased through the adoption of Lean, and the business plan we are putting in place for 2019/2020 identifies key breakthroughs we believe will act as a catalyst for change and move the Irish construction sector forward in value terms.

Richard Fitzpatrick
Chair of Lean Construction Ireland

Jones Engineering

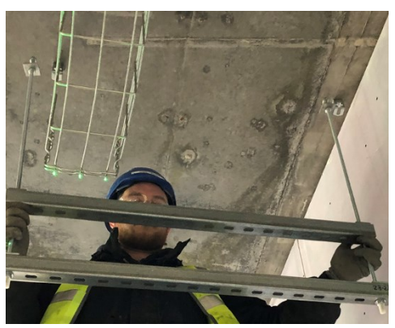
"Visions, imagination, curiosity and experience give rise to discovery." Steven Magee

Electrical innovation on Satellite Hospitals and NRH

Patrick Lynch Electrical are currently working on three hospital projects in Dublin and are utilising new products to great effect.
Eoin Brown is the Contracts Manager and he and his team have given us the details below to share with you.
Hopefully you pick up something here that will help to make your own work easier in the future.

1 Supports

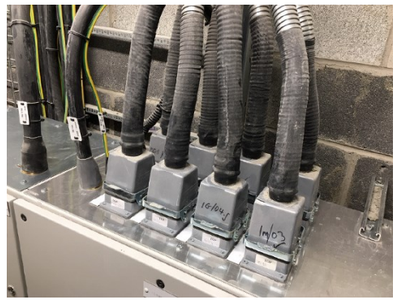
Using concrete screws in conjunction with the "C" type clips shown above, in place of standard wedge anchors for hanging trapeze brackets has really streamlined this process on site.
The guys in the field can now concentrate on fixing all the "C" clips in position while an off-site team pre-fabricates all the trapeze brackets and delivers these when requested on pallets to the required areas ("Just in time delivery")
It is then a very simple and quick install to lift each trapeze into position and tighten the lock nuts.



Benefits:-

- No congestion with "Just in time delivery"
- No double handling
- On-site crew focussed on setting out and installing "C" clips
- Trapeze supports not in the way of other trades during setting out phase
- Off-site pre-fab reduces labour on site

2 Modular Wiring



The concept behind a Core Modular Wiring installation is simple – from a pre-approved design between Core, Wieland and the Electrical Contractor, Wieland produces and tests a system in a quality controlled environment, providing a complete installation that is simply 'plug & play' from the respective distribution board to the furthest point of a circuit.

This system could be implemented on any project that has a BIM design and allows accurate measurement of cable runs to be calculated.

Benefits:-

- Minimises site joints
- Zero waste
- Faster install
- Greater schedule certainty
- On site testing has no failures
- Space saving

3 Conlock conduit

Traditional method for jointing conduit is threading with stocks and die.

Negatives:-

- Produces metal swarf
- Requires cutting compound
- Potential for sprains & strains

Conlock system just needs conduit inserted into fitting end and locked with grubscrew.
Recent data from use on a high profile office development has yielded a 75% labour saving which far outweighs the higher initial material cost.

Having the right tool for the job

Fig. 1

Paul Lynch is a Pipe Fitter currently working on the Mater Hospital project for the Maintenance Department of Jones Engineering. Paul has been with the company for a couple of years but previously worked in the US. During his time in the US he picked up some interesting gadgets designed to make a lot of the day-to-day tasks a pipe fitter has to carry out much easier and more accurate.
In this issue of LEAN Times Paul has shared his innovations with us.
In Fig. 1 Paul demonstrates an innovative pipe alignment clamp. A tedious part of pipe fitting is tacking fittings onto pipe, especially large sizes. Heavy bends can be very awkward to line up and hold in place This clamps holds the fitting aligned to the pipe face and frees up a pair of hands. A fitter could even tack a heavy bend on his own.

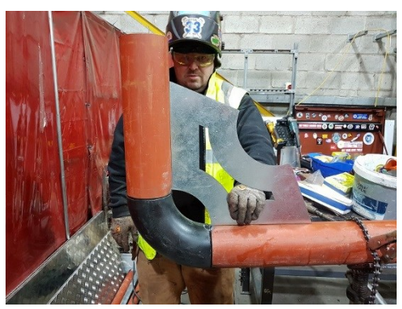


Fig. 2

Looking similar to one of Batman's Batarangs, the next piece of ingenuity is an invaluable addition to the fabrication shop. Normally when squaring pipe onto a bend, the fitter would line up an engineering square and take two measurements along the tacked pipe to ensure it is square before the final tacks are welded. This purpose made tool makes this task much simpler. A square piece of sheet metal with the corner cut away enables the fitter to square the pipe much more easily, as can be seen in Fig. 2. It can be used on many pipe sizes and larger versions can be made to suit bigger pipes.

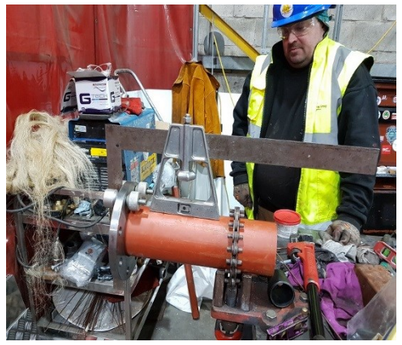


Fig. 3

Fig. 4

In Fig 3 & 4 above, Paul shows us two more instruments to enhance the skill of pipe fitting. When squaring a flange onto a pipe, the short side of an engineering square is placed against the flange face and two measurements are taken along the pipe before the flange is tacked. The tool in Fig. 3 is a magnetic flange alignment tool. The engineering square is clamped into the tool which is magnetically held to the pipe. The flange is automatically aligned with the short side of the square. Again this tool whilst freeing up a pair of hands can be used both horizontally and vertically to tack both sides of a flange.
The next gadgets we see are Flange Pins. These are demonstrated in Fig. 4. The tapered pins tighten up centrally in the bolt holes in order to line up the flange "two-hole-top." When tightened into place a small level can be sat on the pins to make sure the flange holes are aligned.

Fig. 5

The Contour Marker in Fig. 5 is a fairly simple tool, designed to mark the centre of a pipe. This is used when cutting a hole to weld on a branch or saddle to a pipe.

Fig. 6

Marking the hole for a branch on a pipe can be a bit hit and miss at times. Using the Saddle Maker tool shown in Fig. 6 the chore becomes much easier. Used in conjunction with the Contour Marker this tool comes in all pipe sizes for perfect saddles.
Paul has an array of helpful tools in his arsenal all designed to make our daily tasks easier and more accurate.

"The world is always open, waiting to be discovered." Dejan Stojanovic