



LEAN Times

Monthly Update of JEG Lean Information

Jones Engineering Bio Energy Division
Estimating & Tender Submission, Design, Installation & Commissioning on BioEnergy Projects...QSP's 19 & 20

QSP19 Estimating & Tender Submission, Bioenergy Projects

It's important that we have a procedure that covers the area of estimating and tendering for a couple of different reasons.....

1. To ensure a consistent approach, which will improve our chances of being successful with the bid
2. To maintain accurate records of each tender so that analysis can be carried out for marketing purposes

Responsibility lies with the bid manager from within the Bioenergy Division to ensure that the procedure is being followed correctly.

As tenders are received they are date stamped and added to the tender register for tracking.

The bid manager notes the return date and makes sure there is enough time for completion of the bid.

He then allocates the main activities to members of the estimating department....



2. Sending out enquiries to suppliers and subcontractors



3. Making sure return dates are clear to all and can be achieved

When all information has been returned and assembled and the bid manager is satisfied that all requirements have been met, the tender is forwarded to the client for review.

QSP20 Design Installation and Commissioning, Bioenergy Projects

The purpose of this procedure is again to provide structure and guidance for the construction team to follow so the project can be built and handed over in a logical, efficient and complete manner.

Design:-

- JEG design follows current regulations
- Completed in accordance with client's drawings and specifications
- RFI's used to clarify potential issues
- Internal design review carried out before final design issued

Installation:-

- All activities are managed by the Construction Manager
- Plant, materials and labour must all be provided in a timely manner
- Additions and variations must be detailed for the Contracts manager to attend to.

Commissioning:-

- Once systems are completed to the required standards, pressure testing is carried out.
- Commissioning of equipment is carried out by specialist third party.

As-built drawings, all certification and O&M manuals are prepared and handed over to the client for maintenance purposes.



Come On You Jones!

We can't all play for Dublin or Manchester City but yet we all like to wear our favourite teams colours. Most sports fans can identify a teams jersey from a distance and we all want the latest jersey or set of gear for ourselves and our kids. This is why most teams bring out a new kit every year. They make a fortune on their fans commitment and dedication with many teams having second and third sets of gear.



Liverpool Unveil 3rd kit for 2019/2020

Being a professional sportsman is a job in the same way we go to work every day. We should also try to be the best at what we do and be as proud to wear our company colours and logo. By being the best at what we do it encourages skilled workers and young apprentices to want to be part of The Jones Engineering Team. Wear the logo with pride.



Catch-up Corner

As-builts made as easy as a walk in the park
German students visit JEG in Diageo to see Lean in action
Minor works, maintenance & internal audits
QSP 15 & 17
lean@joneseng.com



JCBE's - Huntstown Anaerobic Digestion Facility

Construction on the Huntstown AD Facility commenced mid-February 2018. The Facility is a complete turnkey project for JCBE, consisting of Design, Procurement, Construction, Commissioning and initial start-up/running of the Plant.

The purpose of the project is to utilise the patented JCBE's Thermal Hydrolysis Technology to process :

1. Source separated organic waste
2. Municipal solid waste for Anaerobic Digestion so that the bio-gas generated can be converted by 2no. CHP Engines into electrical energy for export to the National Grid.

Thermal hydrolysis is a two-stage process combining high-pressure boiling of waste or sludge followed by a rapid decompression. This combined action sterilizes the sludge and makes it more biodegradable, which improves digestion performance. Sterilization destroys pathogens in the sludge

resulting in it exceeding the stringent requirements for land application

Some benefits of the Thermal Hydrolysis process -

- Increases net biogas productivity from all organic and bio-mass wastes due to maceration at cellular level.
- Sterilization system allows the processing of material not suitable for conventional processes, e.g. Cat. 2 abattoir waste.
- Facilitates the processing of lignocellulose biomass not normally available to Anaerobic digestion (AD)
- By introducing a high efficiency hydrolysis step, the subsequent AD process can operate at high organic loading rates providing the potential for higher hydraulic AD plant throughput.
- Highly efficient de-packaging process with easy separation of liquefied organics from inorganics e.g. dissolving of bio-degradable packaging and paper.



1. Completing the material take off (MTO)

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.



lean@joneseng.com

Lean Development
Jones Engineering Group
Mespil Court,
Mespil Road,
Dublin 4,
D04 E516

rcurley@joneseng.com swatson@joneseng.com
www.joneseng.com



<http://leanconstructionireland.ie/>

info@leanconstructionireland.ie

"There is no such thing as "away." When you throw anything away, it must go somewhere." Annie Leonard



Jones Celtic BioEnergy provides a complete solution for the generation of renewable energy from biodegradable sources, such as municipal waste, food waste, agricultural waste and biomass. This is achieved through use of anaerobic digestion combined with composting processes to generate renewable energy, in the form of renewable gas, electricity and heat, according to customer and market demands.



BioEnergy Division Overview

We offer unparalleled delivery of a range of BioEnergy technologies which are modelled and tailored to the specific requirements of our clients. Our range of services includes: -

- Thermo-Pressure Hydrolysis
- Dry anaerobic digestion
- Wet anaerobic digestion
- In-Vessel composting
- Biogas upgrading

How we do it?



Thermo-Pressure Hydrolysis

Revolutionary pre-treatment process to convert most biogenic materials into a fully hydrolysed, pumpable fluid with maximum biogas potential.

Dry Anaerobic Digestion

Dry fermentation involves the anaerobic decomposition of "dry" non-pumpable biological material in the absence of oxygen. The process involves the loading of "anaerobic" tunnels with material using loading shovels. The process is particularly suited to bio-waste and mixed waste applications. The system promotes efficient biogas production with very low parasitic energy demands.

Wet Anaerobic Digestion

Wet fermentation involves the anaerobic decomposition of "wet" pumpable biological material in the absence of oxygen. The process involves the loading of "anaerobic" stirred tanks to promote biogas production. These systems are best suited to the digestion of liquid material and silage.

In-Vessel Composting

Composting is the aerobic transformation of biological material in the presence of oxygen and can be engineered in a number of ways. Jones Celtic BioEnergy deliver projects involving Tunnel

Composting, Container Composting and Aerated Pile Composting technologies.

Biogas Upgrading

We operate with a number of different upgrading technologies and can tailor our solution to the needs of individual clients and specific waste streams. This system can be adjusted to meet the strict requirements of gas injection to the grid and of compressed biomethane as a vehicular fuel.



Services

- Turnkey technology provider
- Full EPC experience in large scale infrastructure projects
- Site assessments and feasibility studies
- Site design and facility engineering for new sites
- Business planning and project financing
- Site construction and equipment installation

A Next Generation Biogas Plant

Thermo-Pressure Hydrolysis (TPH)
In partnership with Aerothermal we are now offering a next generation biogas plant through the utilisation of our patented TPH technology. The TPH technology allows a much wider range of bio-wastes to be utilised in the wet digestion process while generating maximum biogas productivity. For example, cardboard and biodegradable packaging is effectively hydrolysed. This technology will change the face of the biogas industry. The system can also process a much larger range of materials compared with existing thermal hydrolysis processes.

Construction on the Huntstown AD project was split into 4 no. discreet areas:



Reception Building – Material handling and hydrolysis that includes an Odour abatement system, Thermal drier for sludge, Plant Rooms, Transformers X 2, ESB sub-station, MV & LV Rooms, MCC Room, Welfare and Administration facility for Operational staff.



Anaerobic Digestion (AD) Facility – consisting of Screening, Grit Removal and Cooling systems. 2no. Buffer Tanks (circa 1000m³ each), 4no. Primary Anaerobic

Digesters (4000m³), 2no. Secondary Digesters (4000m³), and 3no Pump rooms.



Energy Centre – Gas Storage, Steam Boiler, Flare, LTHW Distribution, CHP Engines x 2, Heat recovery Boiler.



Waste Water Treatment Plant – Treatment of redundant substrate, dewatering, aeration, scrubbing so that the substrate can be introduced back into the foul waste stream. (image on front page).

Quality



Northampton Biomethane Plant

Our approach to quality assurance is project specific and customer orientated underpinning our reputation as a leading International Engineering Contracting Group of companies. Don't take our word for it; this is evidenced by 80% of our work being repeat business with existing clients as well as our Quality Management system

being certified to internationally recognised ISO 9001:2015 standard.

Environment

We believe sustainable goals can serve as a catalyst for a continuous cycle of improvement which is why we take our role in environmental planning so seriously. We recognise that we have an important part to play in protecting and enhancing the environment for future generations and to help ensure the long term sustainability of the Construction Industry. There has been a global realisation that current development models are unsustainable and we are committed to embedding sustainability into the core of our activities.

We are accredited to internationally recognised ISO 14001 Environment Management System (EMS), a systematic framework to manage the immediate and long term environment impacts of an organisation's products, services and processes. Of course, we don't stop there. We work together at all levels to develop the correct attitude, practise and work habits, to ensure that we are continually improving our Environmental performance.

A Selection of Our Bioenergy Projects:

Lochhead, Fife Council

1.1 MW bio-waste to CHP
Dry fermentation

BDR, Shanks

0.5 MW MBT to CHP
Dry fermentation

Milton Keynes, Amey Cespa

1.0 MW MBT to CHP
Dry fermentation

Derby, Severn Trent Green Power

6.0 MW bio-waste to CHP
Wet digestion

Huntstown, Viridian

4.2 MW bio-waste to CHP
Wet digestion

"If we intend to provide a better life, and a better world, for future generations, we can't ignore the quality of the environment we leave them."

John Kasich

"The greatest threat to our planet is the belief that someone else will save it." Robert Swan