AquaEnviro

CIWEM Chartered Institution of Water and Environmental Management
Accredited Course

DAY 1 – TUESDAY 19TH NOVEMBER

ADVANCES IN ANAEROBIC DIGESTION

Sponsored by: JACOBS

Full scale validation of a model to predict anaerobic digester performance
Oxtoby, S.[1,2], Winter, P.[1], Smith, S.R.[2], [1]Thames Water, UK, [2]Imperial College London, UK

Genomics orchestration surpasses biochemical limitations for a new renaissance in anaerobic digestion
Lee, P-H., Imperial College London, UK

How to Transition from conventional MAD to THP digestion; experiences from Basingstoke
Merry, J.[1] and Fountain, P.[2], [1]Stantec, UK, [2]Thames Water, UK

The effects of thermal hydrolysis and ammonia concentration on digestion rates at Basingstoke STW. Searching for the sweet spot
Panter, K.[1], Fountain, P.[2], Shana, A.[2], [1]Cambi, UK, [2]Thames Water, UK

Operating a three-staged thermophilic anaerobic digestion facility
Parry, D.[1], Sela, Y.[2], Rabinowitz, B[1], Clark, C.[1], [1]Jacobs, USA [2]Mey Ezor Dan, Israel

Unravelling the Ephyra sludge digestion technology
Koornneef, E., Visser, A., Hendriks, A., Royal HaskoningDHV, The Netherlands

BIOGAS MANAGEMENT

Gastop, optimization of the design of anaerobic digestion with reduced safety area and quality of the biogas produced
Simonsen, N.[1], Bigot, B.[2], Kjaer, R.[1], [1]Krüger A/S, Denmark, [2]Veolia Water Solutions & Technologies, UK

Full-scale digester micro-aeration studies to improve biogas quality
Kraakman, B.[1,2], Diaz, I.[2], Muñoz, R.[2], [1] Jacobs, UK, [2]Institute of Sustainable Processes, University of Valladolid, Spain

Energy production from biogas: responding to current and future opportunities
Horne, P, Richards, S., Pogson, J., Pennick, A., United Utilities, UK

AMMONIA MANAGEMENT

The role of ammonia stripping in the enhancement of anaerobic digestion
Eden, R.[1], Moulden, M.[1], Richardson, K.[1], Thomas, T.[2], [1]Organics Ltd, UK [2]University of Warwick, UK

Operational experience with treatment of THP-MAD sidestream liquors with the ANAMMOX®-process
Driessen, W.[1], Veldhoven, J.T.A.[2], Janssen, M.[2], Hobbs, E.[3], Went, Ch.[3], [1]Paques bv, The Netherlands, [2]Waterschap De Dommel, The Netherlands, [3]Severn Trent Water, UK

Successful commissioning of Basingstoke STW DEMON® liquor treatment plant
Inkpin, L., Madden, G., Merry, J., Fountain, P., Thames Water, UK

Ammonia removal with different deammonification technologies from thermal hydrolysis anaerobic digestion dewatering liquors
Ochs, P.[1,2], Martin, B[2], Germain-Cripps, E.[2], van Loosdrecht, M.[3], Stephenson, T.[1], Soares, A.[1], [1]Cranfield University, UK, [2]Thames Water, UK, [3]Delft University of Technology, The Netherlands

LANDBANK SECURITY

Landbank security issues in the United States
Pepper, I., Water & Energy Sustainable Technology (WEST) Center, The University of Arizona, USA

Overview of biosolids legislation, production and management in developed and developing countries worldwide
Salazar-Espitia, J.D.[1], González, A.F.R.[1], Vasco, J.M.N.[2], [1]National University of Colombia, [2]Catholic University of Manizales, Columbia

Recontamination of dewatered biosolids by *E. coli*
Svennevik, O.K.[1,2], Jonassen, K.R.[1], Svensson, K.[2], Dadgar, F.[2], Hagen, L.H.[1], Westereng, B.[1], Solheim, O.E.[2], Nilsen, P.[2], Horn, S.[1], Bakken, L.[1], [1]Norwegian University of Life Sciences, Norway, [2]Cambi Group AS, Norway

The Biosolids Assurance Scheme: new clothes for the Emperor?
Tompkins, D., Aqua Enviro, UK

Phosphate Acceptance Map: A new research tool for determining land suitability for application of biosolids
Wadsworth, R., Hallett, S., Sakrabani, R., Cranfield University, UK

Environment Agency Sludge Strategy – looking to the future
Foster, S. and Davis, M., Environment Agency, UK

PRE-TREATMENT

Techno-economic analysis of anaerobic digestion pre-treatment technologies for a UK site
Smith, R.W., and Rus, E., Jacobs, UK

Exelys, a simple & continuous TH technology, initial feedbacks from two installations start-up
Bigot, B.[1], MacBeath, S.[1], Nielsen, E.[2], [1]Veolia Water & Technologies UK, [2]Veolia Water & Technologies, Biosolids Techno BU, Denmark

Prediction of viscosity based on sludge type and characteristics and its significance for thermal hydrolysis economy
Svensson, K. and Dadgar, F., Cambi Group AS, Norway

Process intensifying the circular biosolids economy via hydrodynamic cavitation. Increasing biomethane yields of secondary sewage sludge AD plants
Greenwood, E., CaviMax Ltd, UK

MAKING BIOGAS PAY (MORE) – MARKETS FOR BIOMETHANE AND CO2

Session under development – visit www.european-biosolids.com for updates

DAY 2 – WEDNESDAY 20TH NOVEMBER

KEYNOTE

Nutrient recycling in Germany: current and future approaches
Christian Kabbe, Managing Director, EMG EasyMining Germany GmbH

PROCESS MODELLING AND CONTROL

Simulation as a tool for assessing digestion and liquid stream interactions in the context of new regulations
Brian, K., Conidi, D., Dold, P., EnviroSim Associates Ltd, USA

Automation, control and optimisation of the sludge line at WwTP Utrecht with Aquasuite Mine
Heijkoop, D., Post, B., Koorneef, E., Royal HaskoningDHV, The Netherlands

Utilizing integrated software, proven algorithms and decades of chemical applications experience to continuously automate and optimize an already advanced municipal dewatering operation in Denmark
Abinet, R., Kemira Chemicals Germany GmbH

THICKENING AND DEWATERING

Why dewaterabilty of sewage sludge occurs upstream – a model to quantify the effects
Kopp, J., Kläranlagen Beratung Kopp, Germany

Vivianite & struvite: growing challenges for bioresources & wastewater operations
Smyth, M., Aqua Enviro, UK

Techno-economic analysis of post THP+AD dewatering options for a UK site
Rus, E., Jacobs, UK

Predicting dewatered cake solids after conventional AD, Pre-AD THP and Post-AD THP
Svennevik, O.K.[1,2], Beck, G.[3,4], Rus, E.[5], Westereng, B.[1], Higgins, M.[6], Solheim, O.E.[2], Nilsen, P.[J.2], Horn, S.J.[1], Svensson, K.[2], Dadgar, F.[2], [1]Norwegian University of Life Sciences, Norway, [2]Cambi Group AS, Norway, [3]Norwegian University of Life Sciences, Norway, [4]NIBIO, Norwegian Institute of Bioeconomy Research, Norway, [5]Thames Water, UK, [6]Bucknell University, Lewisburg, USA

The practical implementation of reducing sludge dewatering whole life costs
Sims, J.[1] and Parker, D.[2], [1]Huber Technology, UK, [2]Kier Services, UK

Biocage™ sludge thickening - operational experience from two water companies
Thomas, P., Crouch, J., Field, A., Afeco, UK

Demonstration of a continuous TORWASH® pilot plant for dewatering of sewage sludge
Nanou, P., Pels, J.R., Sebastiani, F., van der Meijden, C.M., Kuipers, H., Driessen, W., Vogelaar, J., TNO, The Netherlands

A look in the rear-view mirror after more than 10 years of Bucher presses operation on biosolids dewatering
Mischler, J-F., Bucher Unipektin, Switzerland

2020 AND BEYOND

UK AD through the crystal ball. AD and the Climate Action Imperative
Minter, T., Malaby Biogas, UK

Maximising efficiency when you are not starting from scratch…
Cherry, L., Severn Trent Water, UK

Lithium tracer testing across 12 sludge treatment centres to inform United Utilities' resilience strategy for AMP7
Herron, D.[1] and Croft, J.[2], [1]Aqua Enviro, UK, [2]United Utilities, UK

Preparing for the future – NI Water's sludge strategy
Auty, D.[1] and McArthur, J.[2], [1]PROjEN Ltd, UK, [2]Northern Ireland Water

RESOURCE RECOVERY / NEW PRODUCT DEVELOPMENT

Design of fired-clay brick prototype from biosolids generated in an Andean municipal WWTP in Colombia
Salazar-Espitia, J.D.[1], Ossa-Galvis, G.A.[1], González, F.A.C.[1], Orjuela, A.M.Z.[1], Rios, A.N.[1], Benites, D.G.[1], Vasco, J.M.N.[2], Yepez, O.D.C.[1], Rubio, O.A.P.[1], Salazar, M.T.J.[3], Cardona, J.A.[3], Baena, J.E.[4], Arango, L.A.[4], Buitrago, M.[4], Montoya, A.L.[5], Izaza, I.C.C.[5], [1]National Learning Service of Colombia, [2]Catholic University of Manizales, Columbia, [3]Caldas University, [4]Tejares Terracota of Colombia S.A., [5]Aguas de Manizales S.A. E.S.P.

ABC economy – a three phase approach to valorising food production waste
Kleemann, R. and Murphy, F., University College Dublin, Ireland

Compact phosphorus precipitation and capture technology with operational and ecological benefits for wastewater treatment plants with anaerobic digestions
Dittmann, M., O´Brien, L., Knörle, U., Eliquo Water Group

Towards a quality-by-design approach to produce PAT-based bio-products through nutrient recovery from (digested) wastes
Vaneeckhaute, C., Université Laval, Canada

Biosolids and biogenic fertilisers: developing a circular economy
Whipps, A.[1] and Hammond, A.[2], [1]Pell Frischmann, UK, [2]CCm Technologies Ltd, UK

Futurethinking the sludge value chain
Lake, A., Iwaki, M., Hughes, S., Jacobs, UK

Rigenera sewage sludge innovative treatment for the production of organic biosolids
Cavallino, R.M. and Campi, F., Rigenera S.r.l., Italy

CONVERTING GENETIC INFORMATION INTO ACTION – PROGRESS AND PROBLEMS

Session under development – visit www.european-biosolids.com for updates

Confirmed speakers:

- Prof James Chong, Royal Society Industry Fellow, Department of Biology, York University
- Dr Claudio Avignone Rossa FRSB, Reader in Systems Microbiology, University of Surrey

POSTERS

Microplastics from waste water treatment sludge in soil – What's the story?
Lam, M., Ricardo Energy and Environment, UK

Phosphorus in agricultural soils: the role of biofertilisers and their derivatives
Tompkins, D., Aqua Enviro, UK

Disrupting dewatering… dredging and subsequent microplastic removal
Pring, W., KCP Ltd, UK

Anaerobic digestion of solid residue from lignocellulose catalysis
Hurst, G., Peeters, M., Tedesco, S., Manchester Metropolitan University, UK

Microplastics on land: is sewage sludge the problem?
Radford, F., University of Southampton, UK

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