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Samplings from this Issue

- Eurocodes 1970-2010: why 40 years.
- Doing the business the right way?
- Getting creative with technical training.
- Elasto plastic analysis in conventional tunnelling excavation.
- Foundation design for the Pentominium Tower in Dubai, UAE.
- Economic impact of the integration of alternative vehicle technologies into the New Zealand vehicle fleet.
- Failure mechanisms of pile foundations in liquefiable soil ; Parametric study.
- Pile drag load and downdrag in a liquefaction event.

SPECIAL FOCUS...Dairy wastes

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Management/Leadership/Strategic Planning/Recruitment/Training and Development/Project Management/Corporate Responsibility



√IPENZ 39/01 Producing a programme under the NEC form of contract.

Hide, G Proceedings of the Institution of Civil Engineers Management, Procurement and Law, Volume 163 Issue 2 (May 2010) Pages 59-64.

√IPENZ 39/02 Engineering an idea: The Realization of the Burj Khalifa.

Baker, W. Civil Engineering, Volume 80 Issue 3 (March 2010) Pages 44-47.

Using personal narrative, the author investigates his experiences of working on the structural designs of the world's tallest buildings, including the Burj Khalifa in Dubai.

√IPENZ 39/03 A civil engineer's guide to GPS and GNSS.

Cruddance, P. and Fane, C. Proceedings of the Institution of Civil Engineers: Civil Engineering, Volume 162, Issue CE4 (November 2009) Pages 180-186.

√IPENZ 39/04 Doing business the right way.

Shuster, L. Civil Engineering, Volume 80 Issue 6 (June 2010) Pages 62-65.

Fire engineering and construction firms were included on the list of most ethical companies named by the Ehisphere Institute of New York City. This article looks at how this recognition was achieved by considering corporate governance, industry leadership and innovation.

√IPENZ 39/05 FIDIC and integrity: A status report.

Boyd, J. M. and Padilla, J.D. Leadership & Management in Engineering; Volume 9 Issue 3 (July 2009) Pages 125-128.

√IPENZ 39/06 Staying on track: How to keep in touch with your development progress.

Hannum, K and Hoole, E. Leadership in Action, Volume 29 Issue 2 (May/June 2009) Pages 12-16.

√IPENZ 39/07 Four tips for improving your problem-solving ability.

Carman, M. Training & Development in Australia, Volume 37 Issue 1,(Feb 2010) Pages 024-025,

√IPENZ 39/08 Analyze this: Six steps to leveraging people investments.

Mondore, S., Douthitt, S and Gentr.y, W. Leadership in Action, Volume 29 Issue 2 Pages 3-6.

√IPENZ 39/09 From planning to execution: A critical step.

Finch, C. :Cost Engineering;, Volume 51 Issue 7 (July 2009) Pages 6-7.

√IPENZ 39/10 **Eliminating corruption in our engineering/construction industry.**

de Jongis, M., Henry, W and Stansbury, N. Leadership & Management in Engineering, Volume 9 Issue 3 (July 2009) Pages 105-111.

√IPENZ 39/11 **The security consultant in the design process : a risk led approach.**

Tomlinson, C and Nelson, B. Proceedings of the ICE - Management, Procurement and Law, Volume 163, Issue 2 (May 2010) Pages 51-57

Any visitor to the Middle East will be familiar with the none-too-unattractive ad hoc security measures, usually imposed after a serious security incident; invariably these are incongruous mitigation and worryingly of doubtful efficacy. The current authors believe that in the Middle East there is a lack of knowledge of security risk management and what it offers the built environment. This is illustrated by the fact that security consultants are often appointed almost as an afterthought in many projects. Unfortunately security risk management planning and its associated design and engineering activities have never enjoyed the same obligatory status as those that surround the design of fire prevention and safety. This ignores the potential to develop a risk-led approach offering savings to clients in terms of proportionality, procurement phasing, operational efficacies and, importantly for many clients and their clients, pleasing aesthetics. This article (written by two experienced Arup security consultants) seeks to show what is on offer in the Middle East in terms of focused security risk consultancy and to champion the cause of security risk management in the region's built space.

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http://www.ice.org.uk/services/services_journals.asp

√IPENZ 39/12 **One teaming: Gaining a competitive edge through rapid team formation and deployment.**

Seuts, G and Gandz, J Organisational Dynamics, Volume 38, Issue 4 (October-December 2009) Pages 261-269.

It is an advantage for most companies to be able to instantly form highly effective teams to take on any challenge. This can be the difference between getting and losing a job, satisfying or disappointing the client. The idea of one-teaming is bringing together high performers from diverse organisational or functional backgrounds to form an instant team that is well-functioning. For success, four common themes are identified: team leadership, team composition, extensive practice of one-teamship and clear norms concerning communication and process. The paper concludes with four prescriptions for organisations to achieve one-teaming

√IPENZ 39/13 **A Developmental network & relational savvy approach to talent development: A low cost alternative.**

Chandler, D., Hall, D and Kram, K. Organizational Dynamics, Volume 39, Issue 1 (January-March 2010) Pages 48-56,

The authors report that there appears to be a crisis in the development of human talent, especially at the executive and management level, with part of the problem due to cost. The low-cost solution they propose is to implement practices to improve the relational savvy of staff so that they are then empowered to create their own developmental networks. The article looks at what it means to have relational savvy and its benefits as well as organisational practices that foster developmental networks and relational savvy.

√**IPENZ 39/14 4 Mistakes leaders keep making.**

Schaffer, R. Harvard Business Review, Volume 88 Issue 9 (September 2010) Pages 86-127.

√**IPENZ 39/15 Factors influencing building contractors' pricing for time-related risks in tenders.**

Chan, E. H. W. and Au, M. C. Y. Journal of Construction Engineering & Management, Volume 135, Issue 3 (March 2009) Pages 135-145.

√**IPENZ 39/16 Asset-management strategies for infrastructure embankments.**

Glendining, S., Hall, J. and Manning, L. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, Volume 162, Issue ES2 (June 2009) Pages 111-120.

Many of the earthworks that support UK transport networks are suffering because of their age and historical lack of investment in maintenance and repair. Current asset owners have to satisfy users' expectations of minimal delay in the context of ageing assets, imperfect knowledge of their condition, limited resources, increasing traffic, higher speeds, increasing environmental standards and an increasing threat from climate change. This paper summarises current asset-management practice for infrastructure embankments and illustrates how current research is providing information to assist asset owners in improving asset-management practice in the light of climate change. Additionally, it re-examines asset-management practice using a simple sustainability-based framework.

√**IPENZ 39/17 Collaborative working in highways major maintenance projects.**

Ansell, M. et al. Proceedings of the Institution of Civil Engineers: Management, Procurement and Law, Volume 162, Issue MP2 (May 2009) Pages 59-67.

√**IPENZ 39/18 Tired of PowerPoint? Try this instead.**

McGinn, D. Harvard Business Review, Volume 88 Issue 9 (September 2010) Pages 30-31, The article focuses on the use of graphic recording or visual facilitation in marketing which can emphasize key goals, processes, or ideas. A study by professor Martin Eppler found that visual facilitation increases recall in the observer and that graphic recording is more effective than the PowerPoint computer software because graphic recording can be interactive. Companies that have used graphic recording are noted. The price range for a graphic artist is noted. The software programs, Let's Focus and SmartDraw, are mentioned.

√**IPENZ 39/19 Speaking visually: The roles that pictures play.**

Vlcek, A and Lane, R Training & Development in Australia, Volume 36 Issue 3 (June 2009) Pages 28-30.

Including pictures in presentations can enhance expressive potential. Pictures can provide context and example as well as reducing learning time. This article looks at electing appropriate images and using them effectively.

√**IPENZ 39/20 Getting creative with technical training.**

Reilly, V.. Training & Development in Australia, Volume 37 Issue 1 (February 2010) Pages 022-023,

√IPENZ 39/21 The new breed of technical training.

Mackie, J and Uebel, T. Training & Development in Australia (December 2009) Pages 05-07.
The interactive approach in technical training comprises a pre-work online module, modularised workshops led by a facilitator, post-work activities and self paced training.

√IPENZ 39/22 Get your ideas approved.

Denton, D. K Industrial Engineer: IE, Volume 42 Issue 7 (July 2010) Pages 28-31.

√IPENZ 39/23 Are workers in the construction sector overexposed to noise?

Fernandez, M et al. Noise & Vibration Worldwide; Feb2010, Volume 41 Issue 2 (February 2010)
Pages p11-14.:

The article presents a study on the noise exposure of construction workers in Spain.

√IPENZ 39/24 The Dark and bright sides of renegotiation: An application to transport concession contracts.

De Brux, J., Utilities Policy, Volume 18, Issue 2 (June 2010) Pages 77-85.

Renegotiations of public-private partnerships have recently been the subject of much attention. Economists regularly analyse them through the lens of 'hold up' theories. According to these models, renegotiations are a problem to be avoided: renegotiations become opportunistic because agents are self-interested, and they use renegotiation to seek rents. As a result, renegotiating destroys social surplus. Even when renegotiations occur to fill in the blanks of the contracts, and implement investments that had not been contracted ex ante, they typically predict a process by which parties use renegotiations to maximise their short run individual benefit.

This paper sets out an alternative and new view. Through two case studies, we show that renegotiations may be cooperative, contrary to the conventional view. We find that when parties give an important value to their present and future bilateral relationships, they are prone to find solutions that are sustainable and profitable for both parties. Even acting according to their own self-interest, at the stage of renegotiation, parties try to maximise joint utility. In this way, they reinforce the durability of their relationship.

√IPENZ 39/25 The role of international benchmarking in developing rail infrastructure efficiency estimates.

Smith,A., Wheat,, P and Smith, G. Utilities Policy, Volume 18, Issue 2, (June 2010) Pages 86-93.



Technical Aspects of Engineering Abstracts for most available on request.

√IPENZ 39/26 Seismic sophistication.

Zekioglu, Atila; Darama, Huseyin; Karahasanoglu, Serdar. Civil Engineering, (ASCE) Volume 80 Issue 5 (May2010) Pages 64-87.
Focuses on the completion of the construction of the international terminal at the Sabiha Gökçen International Airport (SGIA) in İstanbul, Turkey which uses a performance-based seismic design approach to withstand an 8.0 magnitude earthquake.



√IPENZ 39/27 Eurocodes, 1970-2010: why 40 years?

Johnson R. P. Proceedings of the Institution of Civil Engineers: Structures and Buildings, Volume 162, Issue SB6 (December 2009) Pages 371-379.

√IPENZ 39/28 Curved bridges: effects of changes of structural system.

Křístek, V. and Vrablik, L. Proceedings of the Institution of Civil Engineers: Bridge Engineering, Volume 162, Issue BE4 (December 2009) Pages 189-198.

√IPENZ 39/29 Design and construction of a 'pointed' arch bridge.

Vitiello, E. Proceedings of the Institution of Civil Engineers: Bridge Engineering, Volume 160, Issue BE4 (December 2007) Pages 181-184.

√IPENZ 39/30 Ten-year field evaluation of corrosion-inhibiting systems in concrete bridge barrier walls.

Daniel Cusson, Shiyuan Qian. ACI Materials Journal, Volume 106 Issue 3 (May/June 2009) Pages 291-

√IPENZ 39/31 Foundation design for the Pentominium tower in Dubai, UAE.

Ibrahim, K., Grahame, B. and Murrells, C. Proceedings of the Institution of Civil Engineers: Civil Engineering, Volume 162, Issue special issue two (November 2009) Pages 25-33.

√IPENZ 39/32 New design equations for channel shear connectors in composite beams.

Pashan, A. and Hosain, M. U. Canadian Journal of Civil Engineering, Volume 36, Issue 9 (September 2009) Pages 1435-1443.

√IPENZ 39/33 Frictional effects of steel grating on I-beams.

Gohnert, M., and Sithole, H. Proceedings of the Institution of Civil Engineers: Structures and Buildings, Volume 163, Issue SB1 (February 2010) Pages 13-18.

√IPENZ 39/34 **Failure mechanisms of pile foundations in liquefiable soil: Parametric study.**
Haldar, Sumanta; Babu, G. L. Sivakumar. International Journal of Geomechanics, Volume 10 Issue 2 (April 2010) Pages 74-84.

√IPENZ 39/35 **Seismic hazard assessment - a holistic microzonation approach.**
Nath, S and Thingbaijam, K. Natural Hazards & Earth System Sciences, Volume 9 Issue 4 (2009) Pages 1445-1459.

√IPENZ 39/36 **Pile drag load and downdrag in a liquefaction event.**
Fellenius, B and Siegel, T. Journal of Geotechnical & Geoenvironmental Engineering, Volume 134 Issue 9 (September 2008) Pages 1412-1416.

√IPENZ 39/37 **Demonstrating environmental benefits of ground improvement.**
Egan, D. and Slocombe, B. C. Proceedings of the Institution of Civil Engineers: Ground Improvement, Volume 163, Issue GI1 (February 2010) Pages 63-69.

√IPENZ 39/38 **Design of a reinforced embankment on compressible soil.**
Swift, G. M. and Jones, D. R. V. Proceedings of the Institution of Civil Engineers: Waste and Resource Management, Volume 160, Issue WR4 (November 2007) Pages 145-154.

√IPENZ 39/39 **Elasto-plastic analysis in conventional tunnelling excavation.**
Fahimifar, A. and Hedayat, A. R. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, Volume 163, Issue GE1 (February 2010) Pages 37-45.



√IPENZ 39/40 **Combating corrosion.**
McArthur, T. Civil Engineering (ASCE), Volume 79 Issue 12 (December 2009) Pages 72-78.
Corrosion of sewer pipelines.

√IPENZ 39/41 **Coating failures on galvanized mast arms**
Vinik, P and Burgess, R. Journal of Protective Coatings & Linings (November 2009) Pages 20-26.

√IPENZ 39/42 **Biomass boiler basics.**
Oldham, C and Schultz, C. Engineered Systems, Volume 26, Issue 12 (December 2009) Pages 38,40,42,44-45.

√IPENZ 39/43 **Optimizing boiler-system efficiency.**
Wamsley, G. Heating/Piping/Air Conditioning Engineering : HPAC, Volume 81 Issue 10 (2009) Pages. 38,40-41.

√**IPENZ 39/44 ANFIS-based approach to predicting scour location of spillways**

Azamathulla, H. M., Ghani, A. A. and Azazi Zakaria, N. Proceedings of the Institution of Civil Engineers: Water Management, Volume 162, Issue WM6 (December 2009) Pages 399-407.

√**IPENZ 39/45 Multiphase flow simulations through Tarbela Dam spillways and tunnels.**

Abid, Muhammad; Siddiqi, Muftooh Ur Rehman. Journal of Water Resource & Protection, Volume 2 Issue (June 2010) Pages 532-539.

√**IPENZ 39/46 Prediction of interaction between a side overflow and bed-load transport in a channel with semi-empirical approaches.**

Rosier, B., Boillat, J. and Schleiss, A. Canadian Journal of Civil Engineering, Volume 36, Issue 11 (November 2009) Pages 1755-1763.

√**IPENZ 39/47 Benchmarking 2D hydraulic models for urban flooding.**

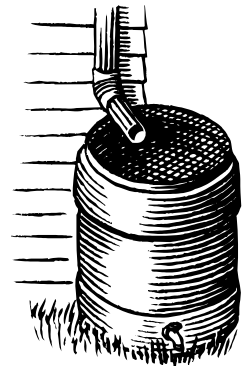
Hunter, N. M. et al. Proceedings of the Institution of Civil Engineers: Water Management, Volume 161, Issue WM1 (February 2008) Pages 13-30.

√**IPENZ 39/48 Using groundwater models to evaluate strategies for drinking-water protection in rural subdivisions.**

Wilcox, J et al. Journal of the American Planning , Volume 76 Issue 3 (Summer 2010) Pages 295-304.

√**IPENZ 39/49 Ozone-contactor flow visualization and quantification using three-dimensional laser-induced fluorescence.**

Kim, D. et al. American Water Works Association, Volume 102 Issue 1 (January 2010) Pages 90-101.



√**IPENZ 39/50 30 Months, Start to Finish.**

Landers, J. Civil Engineering (ASCE), Volume 79 Issue 12 (December 2009) Pages 56-63, Describes the building of a number of wastewater treatment plants in Queensland. Projects include South East Queensland Water Grid, Gold Coast Desalination Plant and the Western Corridor Recycled Water Project.

√**IPENZ 39/51 Carbon in waste: strategies for treatment and landfilling.**

Huber-Humer, M., Mostbauer, P. and Lechner, P. Proceedings of the Institution of Civil Engineers: Waste and Resource Management, Volume 162, Issue WR4 (November 2009) Pages 197-205.

√**IPENZ 39/52 Bus travel-time prediction based on bus speed.**

Yu, B., Yang, Z. Z. and Wang, J. Proceedings of the Institution of Civil Engineers: Transport, Volume 163, Issue TR1 (February 2010) Pages 3-7.

√IPENZ 39/53 **Economic impact of the integration of alternative vehicle technologies into the New Zealand vehicle fleet,**

Leaver,J and Gillingham,K. Journal of Cleaner Production, Volume 18, Issue 9 (June 2010) Pages 908-916.

√IPENZ 39/54 **Design, construction and performance study of photovoltaic integrated forced flow solar dryer.**

Shukla, Arun Kumar; Vishwakarma, Shravan Kumar. Proceedings of World Academy of Science: Engineering & Technology, Volume 39 (March 2009) Pages 439-443.

√IPENZ 39/55 **The influence of operational flexibility on the exploitation of CO2 reduction potential in industrial energy production.**

Sari Siitonen, Pekka Ahtila, Journal of Cleaner Production, Volume 18, Issue 9 (June 2010) Pages 867-874.

√IPENZ 39/56 **Influence of short-term variations on energy-saving opportunities in a pulp mill.**

Jorgen Persson, Thore Berntsson. Journal of Cleaner Production, Volume 18, Issue 9 (June 2010) Pages 935-943.

√IPENZ 39/57 **Environmental remediation and conversion of carbon dioxide (CO2) into useful green products by accelerated carbonation technology.**

Mihee Lim, Gi-Chun Han, Ji-Whan Ahn, Kwang-Suk You. International Journal of Environmental Research and Public Health, Volume 7 Issue (January 2010) Page 203-

√IPENZ 39/58 **Byproduct recovery from reclaimed water reverse osmosis concentrate using lime and soda-ash treatment.**

Farah Mohammadesmaeili et al. Water Environment Research., Volume 82, Issue 4 (April 2010) Pages 342-

√IPENZ 39/59 **Active solar distillation–A detailed review.**

K. Sampathkumar, T.V. Arjunan, P. Pitchandi, P. Senthilkumar. Renewable and Sustainable Energy Reviews, Volume 14, Issue 6 (August 2010) Pages 1503-1526.

Special focus – Dairy Wastes

√IPENZ 39/60 **The carbon footprint of dairy production systems through partial life cycle assessment.**

Rotz, C., Montes, F and Chianese, D. Journal of Dairy Science, Volume 93 Issue 3 (March 2010) Pages 1266-1282.



√**IPENZ 39/61 Agent heterogeneity in adoption of anaerobic digestion technology: Integrating economic, diffusion, and behavioral innovation theories.**

Bishop, C., Shumway, C. and Wandschneider, P. Land Economics, Volume 86 Issue 3, (August 2010) Pages 585-608.

This paper reviews attitudes towards use of anaerobic digestion on dairy farms.

√**IPENZ 39/62 Dairy biogas system effective and economical on a small farm.**

Arias, Joaquin Viquez. BioCycle, Volume 51 Issue 4 (April 2010) Pages 55-56.

Case study of a farm in Costa Rica which uses anaerobic digestion to generate biogas for electricity.

√**IPENZ 39/63 Effect of geometrical dimensions and waste water temperature on the performance of an induced air flotation unit for the treatment of industrial waste water.**

Al-Maliky, Salam J. Bash. Modern Applied Science, Volume 4 Issue 6 (June 2010) Pages 14-19.

√**IPENZ 39/64 Numerical modeling of nitrogen balance for cow manure management in dairy farms.**

Ishii, K. et al. Journal of Solid Waste Technology & Management, Volume 36, Issue 1 (February 2010) Pages 1199-1208.

√**IPENZ 39/65 Recommendations for rationalizing cleaning-in-place in the dairy industry: Case study of an ultra-high temperature heat exchanger.**

Alvarez, N., Daufin, G. and Gésan-Guiziou, G. Journal of Dairy Science, Volume 93, Issue 2 (February 2010) Pages 808-821.

√**IPENZ 39/66 Strategies for the aerobic biological treatment of the dairy wastewaters in controlled conditions.**

Palela, M. et al. Environmental Engineering & Management Journal (EEMJ), Volume 9, Issue 3 (March 2010) Pages 399-405.

√**IPENZ 39/67 Chemical pretreatment of dairy plant effluent.**

Joseph, A. and Sabumon, P. C. Proceedings of World Academy of Science: Engineering & Technology, Volume 39 (March 2009) Pages 141-144.

√**IPENZ 39/68 Energy generation potential of dairy effluent - a case study of Vidya Dairy.**

Desai, H., Nagori, G. P. and Vahora, S. Proceedings of World Academy of Science: Engineering & Technology, Volume 39 (March 2009) Pages 457-459.

√**IPENZ 39/69 Kinetics of anaerobic degradation of screened dairy manure by upflow fixed bed digesters: Effect of natural zeolite addition.**

Nikolaeva, S. et al. Journal of Environmental Science & Health, Part A: Toxic/Hazardous Substances & Environmental Engineering, Volume 44, Issue 2 (February 2009) Pages 146-154.

√IPENZ 39/70 **Three-dimensional groundwater simulation based on estimation of nitrogen loading amounts from different types of nitrogen source on dairy farms.**

Ishii, K. et al. Proceedings of the International Conference on Waste Technology & Management (2009) Pages 757-763.

√IPENZ 39/71 **Evaluation of dairy effluent management options using multiple criteria analysis.**

Hajkowicz, S. and Wheeler, S. Environmental Management, Volume 41, Issue 4 (April 2008) Pages 613-624.

√IPENZ 39/72 **Microalgal dynamics in batch reactors for municipal wastewater treatment containing dairy sewage water.**

Barrera, C. B. Water, Air & Soil Pollution, Volume 190, Issue 1-4 (May 2008) Pages 259-270.

√IPENZ 39/73 **Dairy waste water treatment by combining ozonation and nanofiltration.**

László, Z. Science & Technology, Volume 42, Issue 7 (2007) Pages 1627-1637.

√IPENZ 39/74 **Estimation of biodegradability rate of pollutants in sewage from selected sections of dairy.**

Janczukowicz, W. et al. Environment Protection Engineering, Volume 33, Issue 1 (2007) Pages 77-88.

√IPENZ 39/75 **Current strategies for dairy waste management: A review.**

Arvanitoyannis, I. S. and Giakoundis, A. Critical Reviews in Food Science & Nutrition, Volume 46, Issue 5 (July/August 2006) Pages 379-390.

√IPENZ 39/76 **The impact of potential nitrous oxide mitigation strategies on the environmental and economic performance of dairy systems in four New Zealand catchments.**

de Klein, C. A. M. and Monaghan, R. M. Environmental Sciences, Volume 2, Issue 2/3 (April 2005) pages 351-360.



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