



Dr. Andrew Little



Figure 1, Shell instability of a circular cylinder

From: Carl T.F. Ross, Terry Whittaker & Andrew P.F. Little), "Design of submarine pressure hulls to withstand buckling under external hydrostatic pressure", Proceedings of the International Conference on Computing in Civil and Building Engineering, W. Tizani (Editor), ICCBE2010, 2010 (not sure of date; it is not too legible in the pdf file.)

See:

<http://www.port.ac.uk/school-of-engineering/staff/dr-andrew-little.html>

http://www.researchgate.net/profile/Andrew_Little7/publications

School of Engineering
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Qualifications: BSc (Hons) Mechanical Engineering (sponsored by Rolls-Royce Ltd, Bristol Aero Division), City University, London, PhD Research Degree, "The Performance of Corrugated Carbon Fibre Pressure Vessels Under External Pressure", University of Portsmouth

Autobiography:

My work within education has been fuelled by my experience gained from the aerospace and the computer industry. I completed a five year Undergraduate Apprenticeship with Rolls-Royce Aero Division Bristol and the City University, London. My first appointment was as a Stress Engineer at Rolls-Royce, responsible for the design of safety critical aero engine components. This work included formal hand calculations; computer assisted calculations as well as the then relatively new field of finite element analysis.

My industrial experience includes working as a designer for Ferranti Computer Systems and Plessey on airborne equipment before coming to Portsmouth and joining the world of academe. I have taught a number of units at all levels in Design, Computer Aided Design and Stress Analysis. At Portsmouth, it was a natural step to become involved with various design based consultancies. However, I also became interested in pressure vessel research, which resulted in me embarking on a PhD (while in this full-time post).

I am now an active researcher in the field of pressure vessels under external pressure. This area includes investigations into the effects of underwater vibrations, the performance of conventional steel structures as well as the use of composite materials in pressure vessels.

Research Interests:

Pressure vessels under external pressure; Buckling; Finite element analysis; Composite materials, Vibrations

Selected Publications:

Carl T.F. Ross, Terry Whittaker & Andrew P.F. Little, “Design of submarine pressure hulls to withstand buckling under external hydrostatic pressure”, Proceedings of the International Conference on Computing in Civil and Building Engineering, W. Tizani (Editor), ICCBE2010, 2010 (not sure of date; it is not too legible in the pdf file.)

Andrew P.F. Little, Carl T.F. Ross, David Flowers, Graham X. Brown and Stefan Arndt, “A theoretical and experimental investigation of externally ring stiffened cylindrical pressure vessels subjected to external pressure”, Proceedings of the International Conference on Computing in Civil and Building Engineering, W. Tizani (Editor), ICCBE2010, 2010 (not sure of date; it is not too legible in the pdf file.)

Smith Paul, Ross Carl, Little Andrew Philip Frederick (2012) Formulation of design charts for composite submarine pressure hulls Journal of Ship Production and Design 28 (1): 20-41 10.5957/JSPD.28.1.110007

Ross Carl, Little Andrew, Haidar Y., Waheeb A. (2011) Buckling of carbon/glass composite tubes under uniform external hydrostatic pressure Strain 47: 156-174 10.1111/j.1475-1305.2008.00475.x

Ross Carl, Little Andrew, Brown G., Saphiu Astrit (2009) Buckling of near-perfect thick-walled circular cylinders under-external Hydrostatic pressure Journal of Ocean Technology 4 (2): 84-103

Ross Carl, Little Andrew Philip Frederick, Brown Graham, Nagappan Aravinthan (2008) Inelastic shell instability of geometrically imperfect aluminum alloy circular cylinders under uniform external pressure Marine Technology 45 (3): 175-181

Ross Carl, Little Andrew, Short D., Brown G. (2008) Inelastic buckling of geometrically imperfect tubes under external hydrostatic pressure Journal of Ocean Technology 3 (1): 75-90

Ross Carl, Andriosopoulos G., Little Andrew (2008) Plastic general instability of ring-stiffened conical shells under external pressure Applied Mechanics and Materials 13-14: 213-223
10.4028/www.scientific.net/AMM.13-14.213

Ross, C.T.F., Little, A.P.F., Allsop, R., Smith, C. and Engelhardt, M: Plastic General Instability Of Ring-Reinforced Conical Shells Under Uniform External Pressure , Marine Technology,44, No. 4, (2007) pp. 268-277.

Ross, C. T. F., and Little, A. P. F., 2007, “Design Charts for the General Instability of Ring-Stiffened Conical Shells Under External Hydrostatic Pressure,” Thin-Walled Struct., 45, pp. 199–208.

Ross, C. T. F., Little, A. P. F., and Adeniyi, K. A., 2005, “Plastic Buckling of Ring-Stiffened Conical Shells Under External Hydrostatic Pressure,” Ocean Eng., 32, pp. 21–36.

Ross, C. T. F., Little, A. P. F., Chasapides, L., Banks, J., and Attanasio, D., 2004, “Buckling of Ring Stiffened Domes Under External Hydrostatic Pressure,” Ocean Eng., 31, pp. 239–252.