

Papers and books on cement and concrete

received in the C&CA Library JULY-SEPTEMBER 1970*

MATERIALS

Cement

MANUFACTURE

CHRISTENSEN, N. H. and SIMONSEN, K. A. Diffusion in portland cement clinker. *Journal of the American Ceramic Society*. Vol. 53, No. 7. July 1970. pp. 361-364.

DORN, J. Flowmeter nucleus of cement reagent system. *Pit and Quarry*. Vol. 63, No. 1. July 1970. pp. 145-146.

GALLEGO, J. and LOMBARDERO, M. La nueva fabrica de cemento del Pantano de Contreras. (The new cement factory at Pantano de Contreras.) *Cemento-Hormigón*. Vol. 29, No. 324. March 1961. pp. 126-129.

LYN, A. van der. Prescription for cement plant dust control. *Rock Products*. Vol. 73, No. 8. August 1970. pp. 73, 76-78, 80, 86-87.

MOKIN, P. I. Two-sided feed increases kiln productivity. *Tsement*. No. 2. February 1970. pp. 507. (In Russian.)

SERGEEV, M. I. and GINZBURG, I. B. The effectiveness of setting up automatic control of grinding processes. *Tsement*. No. 2. February 1970. pp. 7-9. (In Russian.)

SHAW, K. Performance of rotary kiln linings in the Soviet Union. *Cement, Lime and Gravel*. Vol. 45, No. 8. August 1970. pp. 201-204.

VOLKONSKII, B. v. Making cement from phospho-gypsum. *Tsement*. No. 2. February 1970. pp. 16-17. (In Russian.)

PROPERTIES

BUTT, YU. M. et al. The mechanism for the formation of crystals and crystal agglomerates of $\text{Ca}(\text{OH})_2$ in hardening cement paste. *Tsement*. No. 2. February 1970. pp. 20-22. (In Russian.)

CASSELL, E. A. and WALKER, T. W. Solidification of sludges with portland cement. *Proceedings of the American Society of Civil Engineers*. Vol. 96, No. SA1. February 1970. pp. 15-26.

CHADDA, L. R. The phenomenon of aggregation in the stabilisation of soils with cement. *The Indian Concrete Journal*. Vol. 44, No. 5. May 1970. pp. 210-212.

JOISEL, A. Prise et fausse-prise des ciments. (Set and false set of cements.) *Revue des Matériaux de Construction*. Vol. 649. October 1969. pp. 309-314.

MIDGLEY, H. G. Compound calculation of the phases in Portland cement clinker. *Cement Technology*. Vol. 1, No. 3. May/June 1970. pp. 79-84.

MIDGLEY, H. G. The effect of lead compounds in aggregate upon the setting of Portland cement. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 42-44.

MUSIKAS, N. Détermination des teneurs en constituants secondaires dans un ciment Portland composé. (Determination of the constituents of Portland cement compounds.) *Revue des Matériaux de Construction*. No. 652/653. January/February 1970. pp. 21-35.

NOBLE, D. F. Reactions and strength development in portland cement-clay mixtures. Reprinted from: *Highway Research Record*. No. 198. 1967. pp. 39-56. Virginia, University of Virginia, 1968. Reprint No. 69.

PIERZCHALA, H. VON. Rheologische Eigenschaften an Portland-Zementpasten. (Rheological properties of Portland cement pastes.) *Tonindustrie Zeitung*. Vol. 94, No. 8. August 1970. pp. 331-336.

RIO, A., CELANI, A. and SAINI, A. Nuove ricerche sul meccanismo di azione e sull'influenza del gesso e del cloruro di calcio sulle caratteristiche strutturali e meccaniche degli idrosilicati prodotti nell'idratazione del C_3S . (New investigations into the action mechanism and influence of the gypsum and calcium on the structural and mechanical characteristics of the hydro-silicates produced during the hydration of C_3S .) *Il Cemento*. Vol. 67, No. 1. January/March 1970. pp. 17-26.

STEINHERZ, A. R. Nouvelles expériences sur l'hydratation du ciment Portland. (New experiments on the hydration of Portland cement.) *Revue des Matériaux de Construction*. No. 652-653. January/February 1970. pp. 36-40.

Aggregates

GREATER LONDON COUNCIL. Marine aggregates (specification). London, 1968. pp. 3. Bulletin No. 16. Item No. 1.

HANSEN, T. C., RICHARDS, C. W. and MINDESS, S. Sand-lime bricks and aerated lightweight concrete from gold mine waste. *Materials Research and Standards*. Vol. 10, No. 8. August 1970. pp. 21-24.

MIDGLEY, H. G. The effect of lead compounds in aggregate upon the setting of Portland cement. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 42-44.

PFEIFER, D. W. *Fly ash aggregate lightweight concrete*. Skokie, Illinois, Portland Cement Association, 1969. pp. 8. RD 003.017.

PIRTZ, D. Investigation of deteriorated concrete arch dam. *Proceedings of the American Society of Civil Engineers*. Vol. 96, No. PO1. January 1970. pp. 23-38.

* For the benefit of readers who wish to index these references, separate unbacked copies of this section of the *Magazine* may be obtained free of charge from the Editor.

Reinforcement

- ALI, M. A. and GRIMER, F. J. Mechanical properties of glass fibre reinforced gypsum. Reprinted from: *Journal of Materials Science*. Vol. 4, Part 5. May 1969. pp. 389-395. Garston, Building Research Station. pp. 8. Current paper 33/69.
- BAUMANN, T. and RÜSCH, H. Versuche zum Studium der Verdübelungswirkung der Biegezugbewehrung eines Stahlbetonbalkens. (Tests for studying the dowel action of the flexural tensile reinforcement in a reinforced concrete beams.) Berlin, Wilhelm Ernst & Sohn, 1970. pp. 43-83. Deutscher Ausschuss für Stahlbeton, Heft 210.
- CLARK, L. A. and EASTWOOD, W. The flexural strength of concrete beams reinforced with very-high-strength steel. *The Structural Engineer*. Vol. 48, No. 7. July 1970. pp. 277-282.
- FASTENAU, W., LEONHARDT, F. and HAHN, V. Der Pressmuffenstoss für gerippte Bewehrungsstäbe. (The squeeze-fitted sleeve splice for ribbed reinforcing bars.) *Beton- und Stahlbetonbau*. Vol. 65, No. 7. July 1970. pp. 168-171.
- JOHANSSON, A. and WARRIS, B. *Deviations in the location of reinforcement*. Stockholm, Swedish Cement and Concrete Research Institute, 1969. pp. 62. Proceedings No. 40.
- MORLEY, C. T. Optimum reinforcement of concrete slab elements against combinations of moments and membrane forces. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 155-162.
- SUNDARA RAJA IYENGAR, K. T., PRAKASH DESAYI and NAGI REDDY, K. Stress-strain characteristics of concrete confined in steel binders. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 173-184.
- VANDEPITTE, D., RATHE, J. and KERCKAERT, P. Sterkteverlies van plaat selijk sterk gekromde voorspanstrengen. (Loss of strength of prestressing strand due to severe curvature.) Reprinted from: *Revue C Tijdschrift*. Vol. 4, No. 9. 1970. pp. 6.
- ZWART, J. Wapening en kwaliteit van betonconstructies. (Reinforcement and quality of concrete construction.) *Cement*. Vol. 22, No. 8. 1970. pp. 327-332.

CONCRETE

Mix design and quality control

- PORTLAND CEMENT ASSOCIATION. *Concrete for hydraulic structures*. Skokie, Illinois, Portland Cement Association, 1969. pp. 8. IS0012.03.
- ZWART, J. Wapening en kwaliteit van betonconstructies. (Reinforcement and quality of concrete structures.) *Cement*. Vol. 22, No. 8. 1970. pp. 327-332.

Properties

- ASOCIACIÓN CENTROAMERICANA DEL CEMENTO Y CONCRETO. *Concreto con aire incluido*. (Air-entrained concrete.) San José, 1970. pp. 7. Tac-10.
- BRIESEMANN, D. and GREGER, H. Zur Frage der Chloridwanderung in PVC Schwelgasen ausgesetztem Beton. (Chloride migration in concrete exposed to gaseous decomposition products of PVC.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 314-321.
- BUILDING RESEARCH STATION. *Corrosion resistant floors in industrial buildings*. Garston, 1970. pp. 4. Digest 120.
- CROOK, D. N. and MURRAY, M. J. Regain of strength after firing of concrete. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 149-154.
- DOUGILL, J. W. Some results for the average stresses induced in the principal components of concrete. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 133-142.
- ELVERY, R. H. and SHAFI, M. Analysis of shrinkage effect on reinforced concrete structural members. *Journal of the American Concrete Institute. Proceedings* Vol. 67, No. 1. January 1970. pp. 45-52.
- GOPALAKRISHNAN, K. S., NEVILLE, A. M. and GHALI, A. A hypothesis on mechanism of creep of concrete with reference to multiaxial compression. *Journal of the American Concrete Institute. Proceedings* Vol. 67, No. 1. January 1970. pp. 29-35.

HEILMANN, H. G. and ZELGER, C. *Spannungs-Dehnungsverhalten von Leichtbeton aus Blahntonzuschlagen*. (Stress-strain behaviour of lightweight concrete made with expanded clay aggregates.) Munich, Technische Hochschule, 1970. pp. 9.

ILLSTON, J. M. and ENGLAND, G. L. Creep and shrinkage of concrete and their influence on structural behaviour—a review of methods of analysis. *The Structural Engineer*. Vol. 48, No. 7. July 1970. pp. 283-292.

JOHNSTON, C. D. Strength and deformation of concrete in uniaxial tension and compression. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 5-16.

MANN, W. *Über den Einfluss der elastischen Eigenschaften von Zementstein und Zuschlag auf die elastischen Eigenschaften von Mörtel und Beton*. (The effect of the elastic properties of hardened cement paste and aggregate on the elastic properties of mortar and concrete.) Aachen, Technical University of Aachen, 1969. pp. 150.

MATHER, B. *Research on concrete: Stanton Walker lecture series on the materials sciences*. College Park, University of Maryland, 1969. pp. 15. Lecture No. 7.

MEYERS, B. L., BRANSON, D. E. and ANDERSON, G. H. *Creep and shrinkage properties of lightweight concrete used in the State of Iowa. Phase 1. Progress report for period February 1968 to October 1968*. Iowa City, University of Iowa, Department of Civil Engineering, 1968. pp. ix, 62.

MEYERS, B. L. and SLATE, F. O. Creep and creep recovery of plain concrete as influenced by moisture conditions and associated variables. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 37-41.

PARROTT, L. J. Some observations on the components of creep in concrete. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 143-148.

SARGIN, M. and HANDA, V. K. *A general formulation for the stress, strain properties of concrete*. Ontario, University of Waterloo 1969. pp. 28. Report No. 3.

SUNDARA RAJA IYENGAR, K. T., PRAKASH DESAYI and NAGI REDDY, K. Stress-strain characteristics of concrete confined in steel binders. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 173-184.

WELCH, G. B. and HAISMAN, B. *Fracture toughness measurement of concrete*. Kensington, N.S.W., New South Wales University, School of Civil Engineering, 1969. pp. 34. Unicity report No. R42.

Curing

COUPER, R. R. The use of combustion products for the accelerated curing of concrete masonry. Reprinted from: *Constructional Review*. Vol. 42, No. 4. November 1969. pp. 65-69. Melbourne, Commonwealth Scientific and Industrial Research Organisation, 1970.

JOHNSON, R. P. The properties of an epoxy mortar and its use for structural joints. *The Structural Engineer*. Vol. 48, No. 6. June 1970. pp. 227-233.

Jointing

REHM, G. and MARTIN, H. Biege-feste Verbindung von Stahlbetonfertigteilen. (Bending-resistant connection of precast reinforced-concrete members.) *Betonstein-Zeitung*. No. 7. July 1970. pp. 447-453.

BAUMANN, T. and RÜSCH, H. Versuche zum Studium der Verdübelungswirkung der Biegezugbewehrung eines Stahlbetonbalkens. (Tests for studying the dowel action of the flexural tensile reinforcement in a reinforced concrete beam.) Berlin, Wilhelm Ernst & Sohn, 1970. pp. 43-83. Deutscher Ausschuss für Stahlbeton. Heft 210.

BEAN, B. L. and DISE, J. R. *Causes of variation in chemical analyses and physical tests of Portland cement*. Washington, D.C., U.S. Department of Commerce, 1969. pp. 29. Building Science series 17.

TESTING

General

- CLARK, L. A. and EASTWOOD, W. The flexural strength of concrete beams reinforced with very-high-strength steel. *The Structural Engineer*. Vol. 48, No. 7. July 1970. pp. 277-282.
- CROOK, D. N. and MURRAY, M. J. Regain of strength after firing of concrete. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 149-154.
- HIGHWAY RESEARCH BOARD. Moisture movement, granular materials, and nuclear instrumentation. *Highway Research Record*. No. 301. 1970. pp. 34.
- MARSHALL, A. L. The design and construction of a controlled environment chamber. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 185-186.
- MEYERS, B. L. and SLATE, F. O. Creep and creep recovery of plain concrete as influenced by moisture conditions and associated variables. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 37-41.
- RYELL, J. and CHOJNACKI, B. *Laboratory and field tests on concrete sealing compounds*. Ontario, Department of Highways, 1969. pp. 50. RR150.
- UNDARA RAJA IYENGAR, K. T., PRAKASH DESAYI and NAGI REDDY, K. Stress-strain characteristics of concrete confined in steel binders. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 173-184.
- VANDEPITTE, D., RATHE, J. and KERCKAERT, P. Sterkteverlies van plaat selijk sterk gekromde voorspanstrengen. (Loss of strength of prestressing strand due to severe curvature.) Reprinted from: *Revue C Tijdschrift*. Vol. 4, No. 9. 1970. pp. 6.
- WALKUS, R. Zginane elementy siatkobetonowe w świetle dotychczasowych badań. (Ferro-cement elements in bending in the light of previous experiments.) *Inżynieria i Budownictwo*. No. 7. 1970. pp. 280-287.

Methods

- FRANCA, G. de C. and PINCUS, G. The distribution of concrete strains in the split cylinder test. *Journal of Materials*. Vol. 4, No. 2. June 1969. pp. 393-407.
- JOHANSSON, A. and WARRIS, B. *Deviations in the location of rein forcement*. Stockholm, Swedish Cement and Concrete Research Institute, 1969. pp. 62. Proceedings No. 40.
- LONGUET, A., BURGLÉN, L. and BELLINA, G. L'extraction au moyen du glycol et le dosage de la chaux libre dans la chimie du ciment. (The use in cement chemistry of Glycol for separating out and titrating free lime.) *Revue des Matériaux de Construction*. No. 652-653. January/February 1970. pp. 1-20.
- SMITH, G. E. *Experimental techniques for determining support reactions in models of beams and slabs*. Crowthorne, Road Research Laboratory, 1970. pp. 19. Report LR 322.
- SYMONS, I. F. The effect of size and shape of specimen upon the unconfined compressive strength of cement-stabilized materials. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 45-50.

Apparatus

- CHANG, H.-S. H. *Use of atomic absorption spectrophotometer for analysis of cement*. Vicksburg, Mississippi, U.S. Waterways Experiment Station, 1970. pp. 15. Miscellaneous paper C-70-5.
- FORRESTER, J. A. A conduction calorimeter for the study of cement hydration. *Cement Technology*. Vol. 1, No. 3. May/June 1970. pp. 95-99.
- LYON, E. V. and RANDALL, F. *Comparison of cylinder mould types for compressive strength*. Skokie, Illinois, Portland Cement Association, 1969. pp. 4. Special bibliography No. 193.

Models

- BAYLY, D. R. An investigation of the stress field at beam-column junctions. *Conrad*. Vol. 2, No. 2. July 1970. pp. 50-55.

LASH, S. D. and NAGARAJA. *The ultimate load capacity of beam and slab bridges*. Ontario, Department of Highways, 1970. pp. 19. Report RR 159.

LAUNAY, P. Etude et construction du caisson en béton précontraint de la centrale nucléaire de Bugey I. (Design and construction of the prestressed concrete pressure vessel for Bugey I nuclear power station.) *Annales de l'Institut Technique du Bâtiment et des Travaux Publics*. Vol. 23, No. 269. May 1970. Supplement No. 71. pp. 70-107.

SWANN, R. A. *The construction and testing of a one-sixteenth scale model for the prestressed concrete superstructure of section 5, Western Avenue Extension*. London, Cement and Concrete Association, 1970. pp. 56. Technical Report TRA 441.

Structural

- BAUMANN, T. and RÜSCH, H. Schubversuche mit indirekter Krafteinleitung. (Shear tests with indirect transmission of force.) Berlin, Wilhelm Ernst & Sohn, 1970. pp. 1-41. Deutscher Ausschuss für Stahlbeton. Heft 210.
- CHATTERJI, A. K. The behaviour of prestressed concrete frames with and without lateral binders under ultimate load. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 163-172.
- DAYARTATNAM, P. *Ultimate torsional capacity of prestressed concrete members*. Kanpur, Indian Institute of Technology, 1970. pp. 32.
- LASH, S. D. and KIRK, D. W. *Concrete tee-beams subjected to torsion and combined bending and torsion*. Ontario, Department of Highways, 1970. pp. 17. Report RR 160.
- MUSPRATT, M. A. Destructive tests on rationally designed slabs. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 25-36.
- PAUL, S. L., SOZEN, M. A., SCHNOBRICH, W. C., KARLSSON, B. I. and ZIMMER, A. *Strength and behavior of prestressed concrete vessels for nuclear reactors*. Vol. I. Urbana, University of Illinois, 1969. pp. 174. Structural Research Series No. 346.
- PAUL, S. L., ZIMMER, A., GOTSCHALL, H. L., MATSON, R. H., KARLSSON, B. J., MOHRAZ, B., SCHNOBRICH, W. C. and SOZEN, M. A. *Strength and behavior of prestressed concrete vessels for nuclear reactors*. Vol. II. Appendixes. Urbana, University of Illinois, 1969. pp. A1-A37, B1-B201, C1-C11, D1-D2, E1-E14.
- RAMU, P., GREINACHER, M., BAUMANN, M. and THURLIMANN, B. *Versuche an gelenkig gelagerten Stahlbetonstützen unter Dauerlast*. (Experiments on unrestrained reinforced concrete columns under sustained loads.) Zurich, Institut für Baustatik, 1969. pp. 86. Bericht No. 6418-1.
- SMITH, R. B. L. Shear reinforcement of reinforced concrete beams subject to distributed loading. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 17-24.

CONSTRUCTIONAL TECHNIQUES

- BLATCHFORD, J. Twin ribbed prestressed beams. *Industrialised Building Systems and Components*. Vol. 7, No. 7/8. July/August 1970. pp. 87-89.
- BERNEY, I. I. Asbestos-cement manufacturing technology. *The ACM*. Vol. 4, No. 5-6. May/June 1970. pp. 23-24, 26, 28-29.
- BHARGAVA, J. *Strength of concrete in high strength vibrated walls*. Stockholm, National Swedish Building Research, 1969. pp. 48. Document No. 6:1969.
- BRITISH PRECAST CONCRETE FEDERATION. *Concrete bricks: practice notes for bricklayers*. London, 1970. pp. 3.
- CAIRONI, M. *In tema di centine incorporate*. (On the centering of arches.) Milan, Politecnico Milano, 1969. pp. 8. Publication No. 455.
- CEMENT AND CONCRETE ASSOCIATION. *Ground floors for small buildings*. London, 1960. pp. 8. Advisory Note No. Cz 17.

CONSTRUCTION INDUSTRY RESEARCH AND INFORMATION ASSOCIATION. Formwork loading design sheets. (1) Metric. (2) Imperial. London, 1969. pp. 4.

DUTRON, P. and COLLET, Y. *Etude bibliographique sur les resurfacements en couche mince ainsi que les réparations des éléments de béton au moyen d'une couche d'apport.* (Bibliographic study on thin resurfacing layers and repairs to concrete components by means of applied layers.) Brussels, Centre National de Recherches Scientifiques et Techniques pour l'Industrie Cimentière, 1969. pp. 78. RR-CRIC-26-f-1969.

ENCKELL, P. Keramiska mosaikplattor på fasadelement. (Ceramic mosaic tiles used for exterior facings on concrete wall panels.) *Nordisk Betong*. Vol. 14, No. 5. 1970. pp. 131-144.

GRAETZ, J. and PICKEL, U. Technik des Spachtelns von Betonwerkstein. (Grouting technique of concrete cast stone.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 285-288.

HAAS, F. Cement supply to remote construction sites. *Cement, Lime and Gravel*. Vol. 45, No. 8. August 1970. pp. 208-210.

HEHN, K.-H. et al. *Aus theorie und Praxis des Stahlbetonbaues.* (On the theory and practice of reinforced concrete construction.) Berlin, Wilhelm Ernst & Sohn, 1969. pp. 228.

HENK, B. and PICKEL, U. Herstellung von Waschbeton. (Production of washed concrete.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 293-295.

HUONDER, A. and VAJDA, P. Neuentwicklung im Silobau—Mischfutter- und Mineralfutterwerke in totaler Vorfertigung. (New development in silo construction—mixed-fodder and mineral-fodder factories wholly precast.) *Betonstein-Zeitung*. No. 7. July 1970. pp. 462-466.

JOHANSSON, A. and WARRIS, B. *Deviations in the location of reinforcement.* Stockholm, Swedish Cement and Concrete Research Institute, 1969. pp. 62. Proceedings No. 40.

KLOPPEL, H. Elektrizität und Elektronik im Betonwerk. (Electricity and electronics in concrete factories.) *Betonstein-Zeitung*. No. 7. July 1970. pp. 454-461.

KUTHE, E. O. Das Maschinen- und Geräte-Angebot für die Beton- und Fertigteil-industrie auf der Hannover-Messe 1970. (Machinery for the concrete and precast element industry: report on the Hanover Fair 1970.) *Betonstein-Zeitung*. No. 7. July 1970. pp. 427-446.

KUTHE, E. O. Maschinelle Herstellung von Gehweg- und Gartenplatten. (Production of footpath and garden flagstones.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 301-306.

NORGARD, L. Klassifisering av Betongoverflater. (Classification of concrete surfaces.) *Nordisk Betong*. Vol. 14, No. 5. 1970. pp. 101-112.

PIETROWIAK, F. Das Betonfertigteilewerk, 3: Lagerung von Stahlbetonfertigteilen. (The precast concrete factory, 3: storage of reinforced concrete members.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 307-312.

ROSENSTROM, S. Betongarbeten i samband med återuppbyggnaden av templen vid Abu Simbel. (Concrete works for the salvage of the Abu Simbel temples.) *Nordisk Betong*. Vol. 14, No. 5. 1970. pp. 113-129.

SCHWARZ, S. Moderne anlage zur Herstellung von Betonwerksteinplatten. (Modern plant for the production of concrete cast stone slabs.) *Betonstein-Zeitung*. No. 5. May 1970. pp. 296-300.

STOFFREGEN, U. and WEIDEMANN, H. Die Ausführung der Talbrücke Bremecke. (The construction of the Bremecke valley bridge.) *Beton- und Stahlbetonbau*. Vol. 65, No. 7. July 1970. pp. 159-164.

TAYLOR WOODROW CONSTRUCTION LTD. Foundations for 45,000 ton reactors present problems. *International Construction*. Vol. 9, No. 6. June 1970. pp. 11-13.

VAN DER NIET, A. Enkele werken in de Parijse ringboulevard. (Some constructions in the Paris ring road.) *Cement*. Vol. 22, No. 8. 1970. pp. 313-320.

DESIGN

AKIN, J. E. Membrane analysis of a spiral barrel vault. *Bulletin of the International Association for Shell Structures*. No. 41. March 1970. pp. 3-6.

ALLEN, D. E. *Probabilistic study of reinforced concrete in bending.* Ottawa, Canada, National Research Council, 1970. pp. 31. Technical paper No. 311.

ANON. Czechoslovak prestressed concrete sleepers. *Inženýrské Stavby*. Vol. 18, No. 5-6. May/June 1970. pp. 216-226.

ANON. Entwurf einer weitgespannten Hängebrücke mit Konstruktionsgedanken aus dem Spannbeton-Brückenbau. (Design of a long-span suspension bridge with some reflections on prestressed concrete bridge design.) *Dywidag-Berichte*. No. 3. 1970. pp. 2-19.

ANON. Suspended roofs in Dywidag-prestressed concrete. *The Indian Concrete Journal*. Vol. 44, No. 4. April 1970. pp. 143-152. No. 5. May 1970. pp. 195-200, 224.

BALLESTEROS, P. Congress of Mexico: the application of shell structures. *Bulletin of the International Association for Shell Structures*. No. 41. March 1970. pp. 33-42.

BARBER, H. The effects of mining subsidence on the external cladding of buildings. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 3/1-3/13.

BATE, S. C. C. and LEWSLEY, C. S. Environmental changes, temperature, creep and shrinkage. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 2/1-2/20.

BAY, H. Die Achsverdrehung aus Torsion im Stadium II bei gleichzeitiger Einwirkung von Biegemoment, Querkraft und Normalkraft. (Axial rotation due to torsion in stage II for simultaneous action of bending moment, shear force and normal force.) *Beton- und Stahlbetonbau*. Vol. 65, No. 7. July 1970. pp. 164-168.

BOSWELL, P. Detailing for movement in precast concrete structures. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 5/1-5/13.

BRAKEL, J. Berekening van statisch onbepaalde gewapendbetonconstructies. (The distribution of forces in hyperstatic concrete structures.) *Cement*. Vol. 22, No. 8. 1970. pp. 321-326.

BRANDENBURGER, J. Internal details that permit movement. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 6/1-6/14.

BROTCHIE, J. F., ROSSET, J. M. and CELLA, A. *A systems approach to shell design.* Zurich, International Association for Shell Structures, 1969. pp. 14. Reprint No. 481.

BUDGEN, W. E. J. Loading—dead, live and wind. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 1/1-1/10.

ELVERY, R. H. and SHAFI, M. Analysis of shrinkage effect on reinforced concrete structural members. *Journal of the American Concrete Institute. Proceedings* Vol. 67, No. 1. January 1970. pp. 45-52.

FAIRHURST, W. A. and PARTNERS. Designing motorways by computer. *International Construction*. Vol. 9, No. 6. June 1970. pp. 2-7, 10.

GUY, I. N. (Editor) *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969.* London, The Concrete Society, 1970. pp. 125.

DAS, P. C. *The analysis of curved multi-span orthotropic bridge decks.* Crowthorne, Road Research Laboratory, 1970. pp. 32. LR 321.

HARROP, J. and SMITHERS, N. J. The analysis and design of short span skew highway bridge slabs. *Journal of the Institution of Highway Engineers*. Vol. 17, No. 8. August 1970. pp. 33-40.

- HOLLAND, A. D. and DEUCE, T. L. G. A review of small span highway bridge design and standardisation. *Journal of the Institution of Highway Engineers*. Vol. 17, No. 8. August 1970. pp. 3-29.
- KALRA, M. L. Empirical formulae for design of long multi-barrel cylindrical shells. *Bulletin of the International Association for Shell Structures*. No. 41. March 1970. pp. 7-32.
- KARMAN, T. *Suggestions for practical recommendations: supplement to the final report of the Symposium on concepts of safety of structures and methods of design, London, 1969*. Zurich, International Association for Bridge and Structural Engineering, 1969. pp. 317-322.
- KENNEDY, J. B. and TAMBERG, K. G. *Problems of skew in concrete bridge design*. Ontario, Department of Highways, 1969. pp. 105. Report RR 144.
- LEEUWEN, J. VAN and MONNIER, TH. Berekeningsmethoden voor betonconstructies. (Methods of calculating concrete structures.) *Cement*. Vol. 22, No. 8. 1970. pp. 345-352.
- LEONHARDT, F. Modern design of television towers. *Proceedings of the Institution of Civil Engineers*. Vol. 46. July 1970. pp. 265-291.
- MAIER, G. A method for approximate solutions of stationary creep problems. Reprinted from: *Meccanica*. Vol. 4, No. 1. 1969. Milan, Istituto di Scienza e Tecnica delle Costruzioni del Politecnica di Milano, 1969. pp. 36-47. Pubblicazione 422.
- MOHRAZ, B., SCHNOBRICH, W. C. and ECHIEVERRIA GOMEZ, A. Crack development in a prestressed concrete reactor vessel as determined by a lumped parameter method. *Nuclear Engineering and Design*. Vol. 11, No. 2. 1970. pp. 286-294.
- MORLEY, C. T. Optimum reinforcement of concrete slab elements against combinations of moments and membrane forces. *Magazine of Concrete Research*. Vol. 22, No. 72. September 1970. pp. 155-162.
- RAKSHIT, K. S. A study of the economics of solid balanced cantilever bridges—a comparison between a solid deck and a T-beam deck with solid section near supports. *The Indian Concrete Journal*. Vol. 44, No. 1. January 1970. pp. 26-30. No. 4. April 1970. pp. 153-157, 180.
- RODIN, J. The implications of movement on structural design. *Design for movement in buildings: Proceedings of a one-day symposium, London, 14 October 1969*. London, The Concrete Society, 1970. pp. 4/1-4/25.
- ROZVANY, G. I. N. and MELCHERS, R. E. Plastic design of axisymmetric slabs. *The Indian Concrete Journal*. Vol. 44, No. 5. May 1970. pp. 201-206, 225.
- SMITH, R. B. L. Shear reinforcement of reinforced concrete beams subject to distributed loading. *Magazine of Concrete Research*. Vol. 22, No. 70. March 1970. pp. 17-24.
- THAKKAR, M. C. and SRIDHAR RAO, J. K. Design of two-way reinforced concrete rectangular slabs by modified Hillerborg's strip method. *The Indian Concrete Journal*. Vol. 44, No. 4. April 1970. pp. 158-166.
- TAPASVI, V. D. Boussinesq's equations for calculating stresses induced in soil by friction on pile shaft. *The Indian Concrete Journal*. Vol. 44, No. 5. May 1970. pp. 207-209, 225.
- UZSOY, S. Z. Approximate analysis of multiple circular cylindrical shell wind shields for high factory chimneys. *Bulletin of the International Association for Shell Structures*. No. 41. March 1970. pp. 43-52.
- YANG, H. T. Y. A finite element stress analysis of the vertical buttresses of a nuclear containment vessel. *Nuclear Engineering and Design*. Vol. 11, No. 2. 1970. pp. 255-268.