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Referências Bibliográficas

- [1] Neville, A. M, “**Creep of concrete: plain, reinforced and prestressed**”, North-Holland Publishing Company, Amsterdam, 1970.
- [2] Woolson, I. H, “**Some remarkable test indicating “flow” of concrete under pressure**”, Engineering News 54, Nº 18, 1907, P. 459.
- [3] Hatt, W. K, “**Notes on the effect of time element in loading reinforced concrete beams**”, ASTM Proc. 7, 1907, P. 421-433.
- [4] Smith, E. B, “**The flow of concrete under sustained loads**”, ACI Journal Proc. 13, 1917, P. 99-102.
- [5] Hasen, T. C, “**Creep of concrete**”, Sucedich Cement and Concrete Research Institute at the Royal Institute Tecnology, Stockholm, Bulletin Nº 33, 1958, P. 48.
- [6] Neville, A. M., “**Propriedades do concreto**”, São Paulo, Ed. Pini, 1997.
- [7] McHerry, D, “A new aspect of creep in concrete and its application to design”, ASTM Proc. 43, 1943, P. 1069-1084.
- [8] “**A ten-year study of creep properties of concrete**”, U. S. Bureau of Reclamation, Concrete Laboratory Report Nº SP-38, July 1953, P. 14.
- [9] Davies, R. D., “**Some experiments on the applicability of the principle of superposition to the strain of concrete subjected to changes of stress, with particular reference to prestressed concrete**”, Magazine of Concrete Research, Nº 27, 1957, P. 167-172.
- [10] Kimishima, H., “**Discussion on reference 24**”, ACI Special Publication Nº 6, 1964, P. 283-285.
- [11] Bäckström, S., “**Creep and creep recovery of cement mortar**”, IABSE Fifth Congress, Preliminary Report, Lisbon, 1956, P. 77-83.

- [12] Kimishima, H.; Kitahara, Y., “**Creep and creep recovery of mass concrete**”, Technical Laboratory, Central Research Institute of Electric Power Industry, Tokio, September 1964.
- [13] Neville, A. M., “**Creep of concrete as a function of its cement paste content**”, Magazine Concrete, Res. 16, Nº 46, 1964, P. 21-30.
- [14] Rüsch, H. and Kordina, K., “**Der Einfluss des Mineralogischen charakters der zuschläge auf das Kriechen von Beton**”, Deutcher Ausschuss für Stahlbeton, Nº 146, pp. 19-133, Berlin 1963.
- [15] Buil, M. and Acker, P., “**Creep of silica fume concrete**”, Cement and concrete research, 15, Nº 3, pp. 463-467, 1985
- [16] Bazant, Z. P.; Xi, Y., “**Drying of concrete: constitutive model and new experiments separating its mechanisms**”, Materials and Structures, 27, Nº 165, 1994, P.3-15.
- [17] Ngab, A. S., Slate, F. O and Nilson, A. H., “**Shrinkage and creep of high-, medium-, and low-strength concretes, including overloads**”, ACI Materials Journal, V.84, Nº 3 May-June 1987, pp. 224-234.
- [18] Smadi, M. M., A. S., Nilson, A. H. and Slate, F. O., “**Shrinkage and creep of high-strength concrete**”, ACI Journal, Proceedings V.78, July-Aug. 1981, pp. 323-341.
- [19] Iravami, S. and McGregor, J. G., “**High-performance concrete under high sustained compressive stresses**”, Structural Engineering Report Nº 200, Departament of Civil Engineering, University of Alberta, Canada, 1994, pp. 314.
- [20] Troxell, G. E.; Raphael, I. M.; Davies, R. E., “**Long-time creep and shrinkage tests of plain and reinforced concrete**”, ASTM Proc. 58, 1958, P. 1101-1020.
- [21] Glucklich, J., “**Creep mechanism in cement mortar**”, ACI Journal 59, pp. 923-948, July 1962.
- [22] Shkoukani, H. T., “**Behaviour of concrete under concentric and eccentric tensile loading**”, Darmstadt concrete 4, pp. 113-232, 1989.

- [23] Lambotte, H., “**Le fluage du beton in torsion**”, Rilen Bull. Nº 17, pp. 3-12, Paris, Dec. 1962.
- [24] Oyamada, R. N., “**Análise estrutural de barras sujeitas à fluência**”, Dissertação de mestrado, Escola Politécnica da Universidade de São Paulo, pp. 97, 1998.
- [25] Rach, C., “**Experimentelle Bestimmung der Spannungsverteilung in der Biegedruckzone**”, Ausschuss für stahlbeton, Nº 191, pp. 24, 1967.
- [26] Rüch, H., Sell, R., Rach, C., Grasser, E., Hummel, A., Wesche, K. and Flatten, H., “**Festigkeit und Verformung von unbewehrtem Beton unter konstanter dauerlast**”, Deutscher ausschuss für stahlbeton, Nº 198, pp. 86, 1968.
- [27] Associação Brasileira de Normas Técnicas, “**NRB 6118: Projeto de estruturas de concreto**”, Rio de Janeiro, 2003.
- [28] Comite Euro-International du Beton, “**CEB-FIP Model code for concrete structures**”, 1990.
- [29] Associação Brasileira de Normas Técnicas, “**NRB 8522: Concreto – Determinação do módulo de deformação estática e diagrama – Tensão-Deformação**”, Rio de Janeiro, 1984.
- [30] Fusco, P. B., “**Estruturas de concreto, solicitações normais**”, Rio de Janeiro, Ed. Livros Técnicos e Científicos, 1981.

Anexo A



Figura A.1 – Formas dos pilares.



Figura A.2 – Formas dos pilares já concretados.



(a)



(b)

Figura A.3 –Ensaio de módulo de elasticidade (a) e (b).

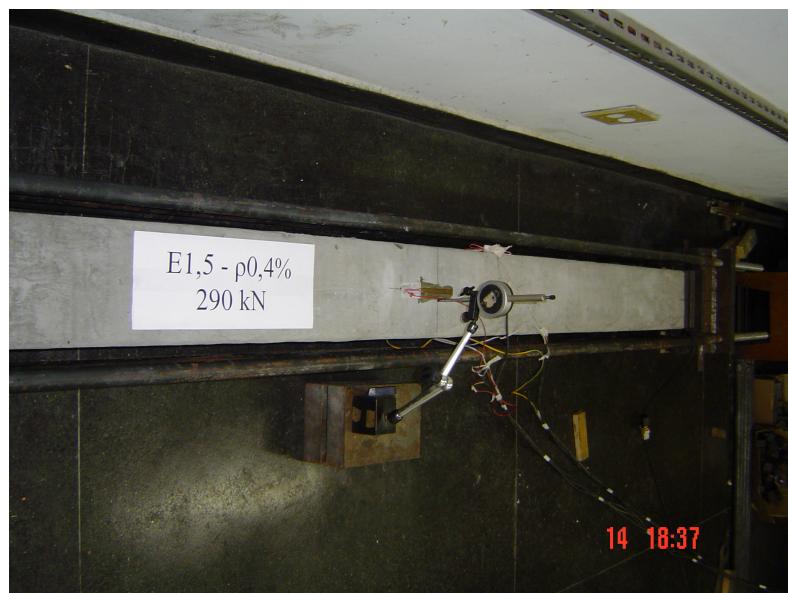


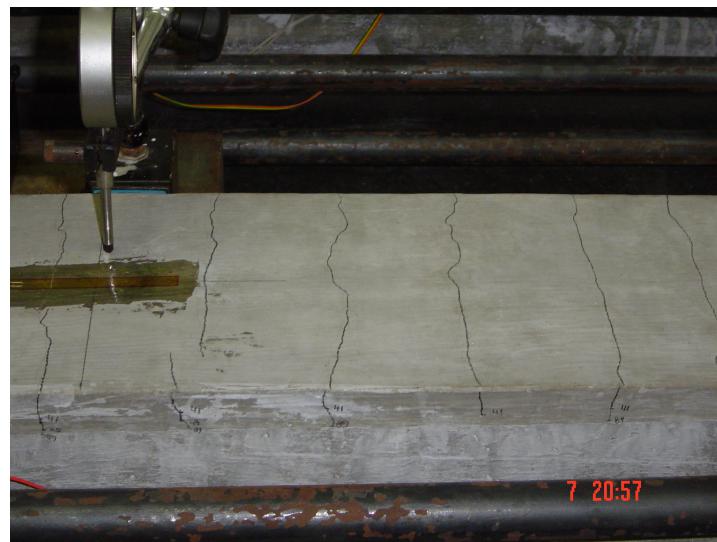
Figura A.4 – Início do ensaio do pilar E1,5-p0,4%.



Figura A.5 – Pilar E1,5-p0,4% após o início do ensaio

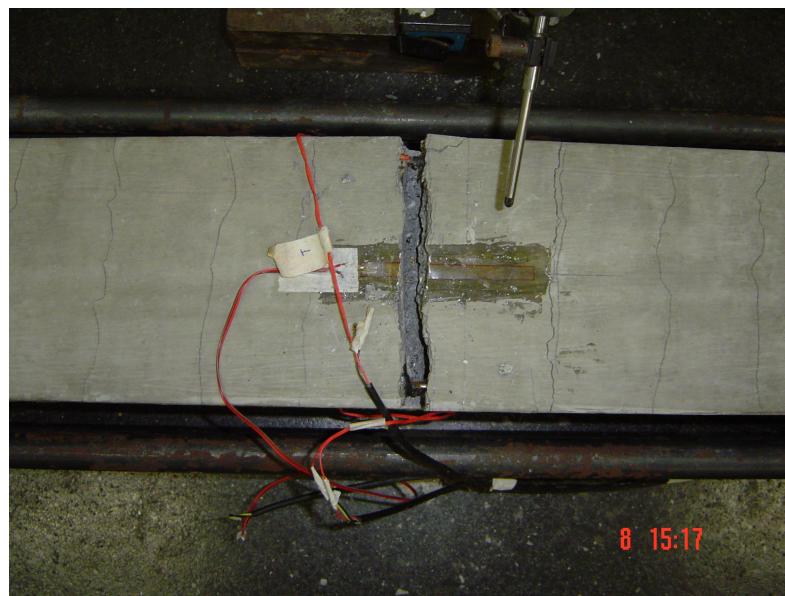


(a)



(b)

Figura A.6 –Fissuração do pilar E2,0-p0,4% (a) e (b).



(a)



(b)

Figura A.7 – Ruptura do pilar E2,0-p0,4%. (a) Vista superior, (b) Vista lateral.



Figura A.8 – Esmagamento da seção de concreto comprimida do pilar E2,0-ρ0,4%.



Figura A.9 – Ruptura do pilar E2,5-ρ0,4%.



Figura A.10 – Ruptura do pilar E2,5-p0,4%.



Figura A.11 – Esmagamento da seção de concreto comprimida do pilar E2,5-p0,4%.

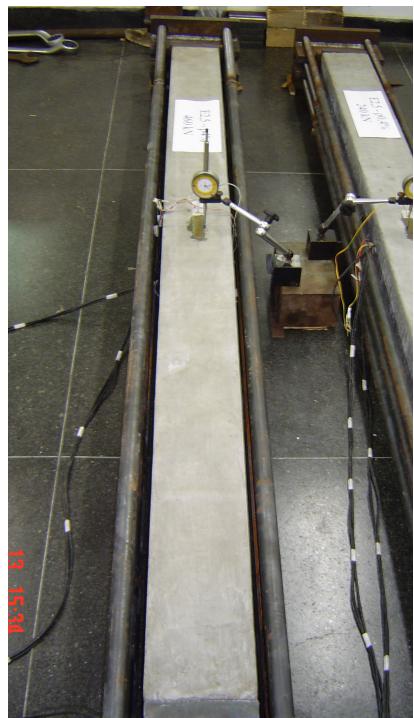


Figura A.12 – Pilar E2,5-p4%.



Figura A.13 – Flambagem do pilar E2,5-p4% no instante t=0.



Figura A.14 – Flambagem do pilar E2,5-p4% após 50 dias de carregamento.



Figura A.15 – Pilar E2,0-p4%.



Figura A.16 – Pilar E2,0-p4%.

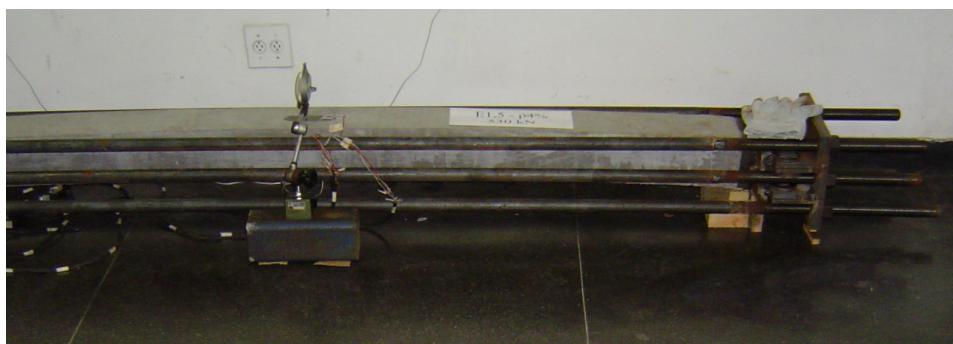


Figura A.17 – Pilar E1,5-p4%.



Figura A.18 – Pilar E2,0-p4%.