Papers on cement and concrete read at the International Congress on Methods of Testing Materials of Construction, the congresses of the International Association for Testing Materials and the symposia on the Chemistry of Cements

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International Congress on Methods of Testing Materials of Construction

This Congress, which was held in Paris on the 9th–16th of July 1900, is believed to have been sponsored by the French Ministry of Public Works. The Communications of the Congress were published in three volumes by Dunod, Paris.

International Association for Testing Materials

This Association had its origin in the series of international congresses on the testing of materials which were called into existence by Professor Johann Bauschinger of Munich. Congresses were held in Munich (1884), Dresden (1886), Berlin (1890) and Vienna (1893). These were known as the "Bauschinger Conferences" and sub-committees were formed to carry out and report on various tests on structural materials. The results of these tests and further recommendations were reported at the congresses but papers by individual members do not appear to have been read.

Professor Bauschinger died in 1893, and at a congress held in Zurich in 1895 it was decided to convert the rather loose organisation of these congresses into a more stable body to be called the International Association for Testing Materials. Further congresses were held at Stockholm (1897) when papers were read by individual members, Budapest (1901), Brussels (1906), Copenhagen (1909) and New York (1912) but the outbreak of the First World War caused the work of the association to be temporarily suspended. In 1927 the first post-war congress was held in Amsterdam when it was decided to rename the association "The New International Association for Testing Materials". In 1930 the new association issued its "First Communications" consisting of papers on the subject of the testing of materials. The word "New" was then dropped from the title of the association and a further congress was held in Zurich in 1931. The last congress was held in London in 1937.

Symposia on the Chemistry of Cements

On January 14th, 1918, a meeting of the Faraday Society was held in the House of the Royal Society of Arts in London and a general discussion took place on "The setting of cements and plasters". Mr. James Swinburne, F.R.S., was in the chair and he introduced the proceedings with the following remarks:

"I may say that the Faraday Society had intended to inaugurate a research into the question of cements and setting generally, realizing its great importance, but there has been great difficulty in this owing to the war and the Council have considered the best thing they can do is to have a discussion such as we are going to have this evening. The Council have been exceedingly fortunate in getting so very many exceedingly able men to read papers and join in the discussion."

This meeting, and the papers which were read, have

since been recognised as the first Symposium on the Chemistry of Cements.

The second Symposium took place in Stockholm in July 1938. It was sponsored by the Royal Swedish Institute for Engineering and the Swedish Cement Association.

The third Symposium will be held in London on the 15th to 20th of September 1952 and will be sponsored by the Building Research Station of the Department of Scientific and Industrial Research and the Cement and Concrete Association.

International Congress on Methods of Testing Materials of Construction

Paris, 1900

The following papers are contained in Volume 2 of the Communications of the congress.

BRULL, A. and HENRY, H. Slag cement. pp. 112–122.

CHATELIER, H. LE. Decomposition of cements in sea water. pp. 51–77.

DALL'ARMI, V. and FORTI, A. Disintegration of brick masonry. pp. 33–36.

DEVAL, M. Hot water tests on cement. pp. 45–50.

FERET, R. Moisture tests as a means of determining the chemical composition of hydraulic binders. pp. 37–44.

FERET, R. Experiences with puzzolanas. New uses and tests. pp. 95–109.

REBUFFAT, O. Puzzolana mortars in maritime structures. pp. 91–94.

SCHOULATCHENKO, A-R. The action of sea water on hydraulic mortars. pp. 79–90.

The following paper is contained in Vol. 3 of the Communications of the congress.

VIALLET, M. Methods of testing artificial stones. pp. 9–13.

Congresses of the International Association for Testing Materials

Stockholm, 1897

EURICH, DR. On anomalies in the setting of cement.

MEYER, DR. An appreciation of hydraulic concretes.

MICHAËLIS, W. On the process of hardening of calcareous concrete materials.

MICHAËLIS, W. On the hardening of calcareous hydraulic concretes.

TETMAJER, L. The determination of the normal consistency for research on the strength of mortars in particular on the conditions which allow equal density to be obtained in tensile test specimens and in compression specimens.

Budapest, 1901

BAIRE, G. On the density of briquettes of neat cement for tensile tests.

BERGER, F. On rapid methods for determining the strength of hydraulic cements.

BLOUNT, B. The permanency of volume of cements.

CHATELIER, H. LE. On simplified accelerated tests for determining the soundness of cements.

CHATELIER, H. LE. On the chemical decomposition of cements exposed to sea water.

DEVAL, L. On the influence of the sulphates of lime on cement and on the constitution of the sulpho-aluminates in hydraulic lime.

FERET, R. Experiments on the adhesion of mortars.

FOSS, A. The determination of the coefficients of strength for Portland cement for the calculation of its strength in bending, after the method of R. Feret.

GARY, M. The present status of cement testing in Germany.

LEDUC, M. On the dissociation of hydraulic substances.

LEDUC, M. On dry and plastic mortars.

LEDUC, M. The relation of the fineness of cements to their expansion.

LEDUC, M. On the influence of the fineness of grain of cements on their hydration.

MAYNARD, A. The action of sea water on cements.

MERCIER, M. Bending tests on hydraulic cements.

TETMAJER, L. On the influence of certain salts on the setting and hardening process of Portland cement.

ZERLIMSKI, C. and ZHUK, J. Comparative methods for testing Roman cements.

Brussels, 1906

BAIRE, G. Determination of the specific gravity of cements. pp. 6.

BAUCHÈRE, A. Tests on the decomposition of cement mortars by sea water. pp. 5.

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CHATELIER, H. LE. On the behaviour of cements in sea water. pp. 16.

CZARNOMSKI, W. and BAYKOFF, A. On the behaviour of cement in sea water. pp. 35.

FERET, R. To establish methods for testing puzzolanas with the object of determining their value for making mortars. pp. 52.

FERET, R. Examination and evaluation of the resolutions of the conference of 1884–1893 concerning the adhesive strength of hydraulic cements. pp. 34.

GARY, M. Determination of a standard method for separation of the finest particles in Portland cement by liquid and air processes. pp. 22.

GARY, M. Graphic representation of the process of setting in the case of cements. pp. 11.

GRECO, M. Experiments on the resistance to shearing of cement mortars. pp. 5.

HERFELDT, G. On the behaviour of cement in sea water. pp. 31.

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Copenhagen, 1909

BENETTI, J. Experiences and tests of the control of reinforced concrete in Italy. pp. 5.

BERGER, F. On rapid methods for determining the strength of hydraulic cements. pp. 7.

BIED, J. Experiments on the decomposition of mortars by sulphate waters. pp. 10.

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EMPERGER, F. VON. Casualties in reinforced concrete building. pp. 9.

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PETERSEN, M. Determination of the simplest method for the separation of the finest particles in Portland cement by liquid and air processes. pp. 10.

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SCHÜLE, F. Experimental research on reinforced concrete in Switzerland. pp. 4.

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New York, 1912

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CHAPMAN, C. M. Tests for concrete. pp. 8.

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CZARNOMSKI, W. On the state of preservation of test blocks proceeding from the harbour works, immersed in the Baltic Sea at Libau Harbour. pp. 19.

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SCHEIT, H. and PROBST, E. Tests of continuous beams in reinforced concrete. pp. 13.

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Amsterdam, 1927

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CHATELIER, H. LE and DUHAMMEAUX, M. Aluminous cements. pp. 208–218.

CRUM, R. W. Design of concrete mixtures. pp. 32–60.

DAVIS, R. Volumetric change in Portland cement mortars and concretes due to changes other than variations in temperature. pp. 145–166.

DUTRON, R. Research on the proportioning of mortars and concretes. pp. 252–262.

EMPERGER, F. VON. High quality steel for compressive strength in reinforced concrete. pp. 8–12.

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GEHLER, W. Strength tests on cements with inclusion of constancy of volume and shrinkage. pp. 106–126.

GRÜN, R. Concrete in sea water. pp. 184–207.

HAEGERMANN, G. On the methods of quality evaluation of cement. pp. 61–74.

JOYE, P. The thermal phenomena of the setting of Portland cement. pp. 219–232.

KROKNER, F. Increase in the strength of concrete and mortar with age. pp. 75–84.

MAGNEL, G. Contribution to the study of concretes. pp. 139–144.

MAILLART, R. Compressive stress by bending. pp. 13–17.

MEYER, E. V. Cell concrete. pp. 233–239.

PROBST, E. Problems of reinforced concrete. pp. 1–7.

RABOZÉE, H. Shrinkage and expansion of concrete. pp. 167–171.

ROS, M. The present-day position of strength tests of cements in accordance with specifications. pp. 85–105.

Zürich, 1931

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BAKKER, J. A. Condition of reinforced concrete structures after standing for 20 years and over. pp. 1160–1165.

BATES, P. H. Suggested investigations of high alumina cements. pp. 942–947.

BOEUF, A. PENA. Elasticity and strength of concrete. pp. 964–968.

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FERRARI, F. Cements and puzzolanic substances. pp. 846–853.

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GRAF, O. The more important properties of concrete and their significance and application in practice. pp. 969–980.

GRÜN, R. Cement containing added hydraulic materials. pp. 778–845.

HAEGERMANN, G. Cement testing using mortar having a high water content. pp. 669–672.

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MAITRE-DEVALLON, H. Determination of the cement ratio for mortar and concrete made from cement or hydraulic lime. pp. 723–727.

PERFETTI, A. The influence of the water-cement ratio on the mechanical strength of cement mortars. pp. 706–708.

PERFETTI, A. and PALUMBO, E. Effect of variations of temperature during mould hammering and seasoning on the strength of cements. pp. 699–705.

RENGADE, E. High alumina cements. pp. 928–941.

RICHART, F. E. Stresses and strains in reinforced concrete columns. pp. 1121–1148.

SANTARELLA, L. Resistance and elasticity of concrete made with Italian cements. pp. 981–999.

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BAIRE, G. Mechanical strength of mortars stored in sulphate solutions. pp. 266–268.

BATES, P. H. Controlling the heat of hydration of cements. pp. 262–264.

BATTA, G. Remarks relative to the disintegration of concretes. pp. 264–266.

BRUND, A. Quicker testing of cement and concrete by means of electrical heating. pp. 256–257.

DAVEY, N. Influence of temperature on the strength of concrete. pp. 342–344.

DUTRON, R. Slow deformations of concrete and reinforced concrete by the action of shrinkage and permanent load. pp. 289–292.

FERET, R. Porosity and permeability of concretes. pp. 329–330.

FERET, R. Relation between the tensile and compressive strengths of mortars and concretes. pp. 331–332.

FERRARI, F. Ferrous cements and ferrous puzzolanas and aggressive waters. pp. 274–276.

GEHLER, W. Reinforced concrete. Methods of calculation and results of tests. pp. 325–327.

GESSNER, A. and FRANK, A. Laboratory technique in testing the strength of plastic mortars. pp. 251–253.

GLANVILLE, W. H. Strength tests for high alumina cement. pp. 249–251.

GLANVILLE, W. H. Grading and workability. pp. 335–341.

GOLDBECK, A. T. Testing of aggregates for durability in concrete. pp. 348–349.

GRAF, O. On the shrinkage of concrete, its magnitude, and the conditions governing its comparative measurement. pp. 284–286.

GRAF, O. On the compaction of mortar and concrete by vibration. pp. 294–296.

GRÜN, R. Concrete pipes. pp. 303–306.

HAEGERMANN, G. On the testing of cement through the medium of plastic mortars. pp. 253–255.

HELLSTRÖM, B. Methods of testing cements for large dams. pp. 260–262.

L'HERMITE, R. Research on the influence of mechanical factors on the setting of cements and concretes of mineral powders. pp. 332–334.

JACKSON, F. H. High frequency vibration of concrete. pp. 300–303.

KRÁL, A. Influence of the petrographical properties of the aggregate on the strength and hardness of concretes. pp. 346–348.

KÜHL, H. Sea water—cements. The chemical destruction of concrete. pp. 269–272.

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LEA, F. M. The testing of pozzolanic cements. pp. 272–274.

LOVENTHAL, J. The testing of waterproofing materials for concrete. pp. 282–283.

McMILLAN, F. R. Volume changes of concrete. pp. 401–403.

MEYER, E. V. Investigations regarding aggregates for concrete. pp. 407–409.

MÖRSCH, E. Steel with high yield point as reinforcement in reinforced concrete construction. pp. 321–324.

NEWPORT, A. J. Compaction of mortar cubes by vibration. pp. 296–300.

PERFETTI, A. Laboratory tests on plastic mortars in relation to other tests suggested for the acceptance of cements. pp. 255–256.

RENGADE, E. On some properties of Ciment Fondu. pp. 244–248.

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EKWALL, A. Deterioration of concrete in hydraulic structures. pp. 162–166.

EMPERGER, F. VON. Deformation of the reinforcement as a measure of its value in ferro-concrete. pp. 248–254.

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GRAF, O. Investigation into the strength of mortar and concrete for use in large structures and for the manufacture of cement products. pp. 88–93.

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