

IGS NEWS

NEWSLETTER OF THE INTERNATIONAL GEOTEXTILE SOCIETY

VOLUME 3 NO 1

AUGUST 1987

The IGS has an Official Technical Journal

by
J.P. Giroud
President of the IGS

The first objective of the IGS, according to its bylaws, is "to disseminate knowledge on all matters relevant to geotextiles, geomembranes, and related products". These "relevant matters" obviously include technical matters, the knowledge of which is so important to disseminate. The IGS has already accomplished a lot in this domain by promoting international conferences such as the very successful Vienna Conference (1986) and the upcoming conference in The Hague (1990), as well as other conferences in countries such as France, the United States, Japan, and Singapore. But conferences have their own limitations including the necessity to travel, the periodicity, and the limited length of the papers. Clearly, there is a need for journals which are delivered to your desk several times a year, and in which detailed technical papers can be published. The IGS is willing to encourage and even promote such journals, provided they meet high standards of quality. Certainly "Geotextiles and Geomembranes" meets such standards and the IGS has negotiated and signed an agreement with this journal.

This agreement is mutually beneficial: it confers on "Geotextiles and Geomembranes" a well-deserved official status, and IGS members enjoy special subscription rates. This agreement is also an indication that our discipline has come of age. Four years ago, before the IGS and "Geotextiles and Geomembranes" existed, activities and publica-

tions related to geotextiles and geomembranes were proliferating in an unorganized manner. Today, the design and use of geotextiles, geomembranes, and related products have the attributes of a well-established discipline: a professional society which organizes international conferences using the traditional four-year cycle, and an official journal whose cover bears the society's logo.

I encourage IGS members to write papers for "Geotextiles and Geomembranes". The only acceptance criterion is a high level of quality. Papers can be very short (e.g., one page technical note), or very long (I have recently submitted a 80-page paper which is being reviewed; why not you?). Papers can be of any kind: case histories (which are most welcome), research papers, design methods, etc. Discussions of published papers are encouraged and I know some IGS members who certainly can make discussions lively!

The IGS is grateful to Professor K. van Harten, IGS vice-president, and Dr. G. Massenau, IGS secretary, who took the most active part in the preparation of the agreement. The IGS is particularly fortunate that the editor of "Geotextiles and Geomembranes" is Professor T.S. Ingold, who made the journal a success in less than three years through extremely hard work and who deserves recognition from an entire profession.

Geotextile Design by Function: The Only Geological Solution

by
Ronald K. Frobé

Within the past few years terms such as geotextiles, geogrids, geomembranes and geocomposites have become common to the engineering community. These terms describe man-made synthetic materials used in the improvement of soil and rock. Hence the term geosynthetics. There has been an enormous growth in the international use of geosynthetics and there have been extensive scientific studies and field research on all aspects of geosynthetics from durability through design and application.

However, there is presently very little suitable technical literature available to the civil engineer and the geotechnical engineer to describe the application of geosynthetics and, in particular, geotextiles relative to the principles of conventional soil mechanics. To the contrary, in most instances the user of the new geosynthetic is forced to accept past methods as the basis for design rather than precalculate required results and prove a factor of safety as is common in engineering practice. Past basis for "design" (and I use

this term loosely) has been "design by price", "design by specification" or "design by chance".

The purpose of this article is to point out that there is indeed a fourth alternative for geosynthetic design which is commonly referred to as "design by function". The operating principles of geosynthetics in the soil can be best understood by defining the design function for a given application. It is now commonly understood that there are basically six functions that a geosynthetic can serve. These six functions are separation, filtration, drainage, reinforcement, protection and moisture barrier (or waterproofing). Depending on the application and depending on the nature of the project, these six functions can occur as a combination of two or more of the individual functions or as one single function.

Procedures used in outlining the "design by function" concept using the function of the geosynthetic as the basis for determining the principal requirements are outlined as follows:

- Step 1. Address and understand the application for the geosynthetic.
- Step 2. Determine the minimum factor of safety (FS_{min}) for the project.
- Step 3. Define the primary function under which the geosynthetic will serve.
- Step 4. Define the geosynthetic properties necessary for the material to function as required.
- Step 5. Take the geosynthetic property values and required design values and calculate an actual factor of safety. FS_{actual} equals minimum property divided by the required property ($FS_{actual} = X_{min}/X_{required}$).
- Step 6. Most geosynthetic uses involve multiple functions. Secondary functions must also be checked at this time and in the same manner as outlined above for the geosynthetic.
- Step 7. Compare the actual factor of safety (FS_{actual}) with the minimum factor of safety (FS_{min}) and

if the factor of safety actual (FS_{actual}) is greater, then the geosynthetic is acceptable. If other geosynthetics are also acceptable, then the least cost may become the deciding factor.

Designing with geosynthetics by the above procedures is not necessarily different from designing traditionally with geotechnical engineering concepts without geosynthetics. It is apparent that there are many new terms that must be mastered by design engineers. Once they are mastered and used in a comfortable methodology, the design engineer can, in fact, proceed to calculate every required property. At that point, a comparison of the required property to the geosynthetic material property can be made resulting in a factor of safety. If the factor of safety is indeed adequate, then the least expensive available material that meets the factor of safety for the design may be the most viable material.

The design by function concept is the most rational and honest approach to a geosynthetic design that one can use. However, there is very little information available in the geosynthetic community today that will give the design engineer suitable technical information to instruct him in the use of geotechnical engineering principles in relation to geosynthetics. The design engineer must know the application of geosynthetics relative to the principles of conventional soil mechanics. If he does not know the relationship and if there is not enough research and available data on present materials, then he cannot relate the properties of a given geosynthetic to what is needed in a particular geotechnical design.

Manufacturers of geosynthetic materials must be held responsible for developing design oriented data and procedures that will enable the design engineer to effectively proceed with his own design process. The same need that is required today of geosynthetics was required yesterday of the primary building components of concrete and steel. If the major manufacturers of other synthetic products for use in the construction industry can develop guidelines for their materials based on historical accumulated data, then why can't the geosynthetic industry develop design guidelines that are useful to the end-user?

Society Activity

IGS Officers have busy meeting in Brussels

Dr. J.P. Giroud (President), Prof. K. van Harten (Vice President), Mr. Ch. Schaerer (Past President), Mr. P. Stevenson (Treasurer) and Dr. G. Massenaux (Secretary) met in Brussels on May 23 and 24. The meeting was held for the purposes of taking follow-up action relating to decisions made at the Tampa council meeting and to prepare for the next council meeting scheduled to be held in The Hague on September 26 and 27.

The officers reviewed the membership and financial situation of the IGS and discussed improvements to the forthcoming IGS Directory, which will be published in September 1987.

The officers worked out the principles of proposals they will submit to the next council meeting. These proposals mainly relate to the Newsletter, which in their view ought to be given higher priority as a communication tool between IGS members and to the procedures to be adopted in selecting the venue of the 1994 International Conference.

The officers also discussed matters concerning the IVth International Conference to be held in The Hague in 1990 (paper selection, exhibition organization, coordination with the IGS). The next council meeting is considered to be a good opportunity for the IGS Council members to meet with the Dutch organizing committee which will ensure excellent coordination for the many activities which are envisioned for the IVth International Conference on Geotextiles.

(Reported by G. Massenaux)

Japanese Chapter

The Japanese Chapter of the IGS continues to be very active. The number of members has been increasing rapidly from 69 in April 1986 to 102 by July 1987 (including 6 corporate members). The Chapter has organized several seminars and symposia including a Seminar on Geotextiles, Geomembranes and Related Materials held in Tokyo on Wednesday, May 13, 1987 and a Symposium on Geosynthetics held in Kyoto on Sunday, July 19, 1987. Another Symposium on Geotextiles is to be held in Tokyo in December 1987.

The Chapter has also decided to support the Kyushu International Geotechnical Symposium on the Theory and Practice of Earth Reinforcement (including geotextiles and geogrids) to be held in October 1988.

The annual meeting of the Japanese Society of Geotechnical Engineers held June 10-14, 1987 in Niigata included two sessions on geotextiles. The Japanese Society of Geotechnical Engineers is also going to publish a book "Geotextiles (in Japanese)" in the spring of 1988. Members of the Japanese Chapter of the IGS are actively involved in preparation of the book.

(Reported by Prof. M. Fukuoka and Dr. T. Akagi)

News of the World

Second Italian Symposium on Geotextiles

The private Company Tecno Consult Veneta, under the auspices of the Ministry of Public Works, organized the Second Italian Symposium on Geotextiles, which was held in Roma (14 November 1986) and in Pomezia (15 November 1986). The first day included the technical sessions which were primarily devoted to standards and specifications for geotextiles and related products, while the second day was devoted to the trade exhibition involving approximately twelve firms.

The symposium attracted an audience of approximately 200, including many geotechnical engineers who are members of the Italian Society for Soil Mechanics and Foundation Engineering. Mr. L. Sortino, President of the First Section of the General Council for the Public Works in Italy, chaired the symposium and also presented the Introductory Lecture. Professor G. Matteotti, University of Padova, and Professor P. Colombo, President of the Italian Geotechnical Society, acted as General Reporters. Approximately 20 papers were presented at the symposium which concluded with a lecture by Mr. D. Cazzuffi from ENEL's Research Centre in Milano.

A letter from Dr. J.P. Giroud, President of the International Geotextile Society, expressing the best wishes of the IGS was read to the participants of the symposium.

(Reported by D. Cazzuffi)

Geotextiles at Clemson University, U.S.A.

Clemson University, in its attempt to keep up with emerging technologies, was one of the early institutions to undertake geotextile research.

The first three Geotextile conferences held in the United States were organized by the Office of Professional Development in the College of Commerce and Industry at Clemson University. The dates of these conferences were July 10-12 1979, June 25-26 1980, and May 6-7 1982. These conferences were held during the period between the First International Conference held in Paris, France in April 1977, and the Second International Conference held in Las Vegas, U.S.A. in August 1982.

Faculty of the School of Textiles have been engaged in research relating to geotextile materials in conjunction with fiber and fabric producers in South Carolina. Research on creep evaluation of geotextiles was carried out by one of

the school's graduate students in 1982. The School of Textiles and the Office of Professional Development are members of several organizations such as IFAI, Industrial Fabric Association International, and INDA, Association of the Nonwoven Fabrics Industry.

Realizing the worldwide and significant impact of geotextile materials and in recognition of the International Geotextile Society, Clemson University invited a representative of the IGS to the inauguration of its eleventh president, Dr. Max Lennon. The president of IGS, Dr. J.P. Giroud, was the society's representative at the inauguration. Dr. Giroud, a former professor, felt back at home with the academic festivities.

(Reported by Prof. Hassan Behery)

Geotextiles in Venezuela

Geotextiles and Geomembranes are both finding increasing use in Venezuela. Two recent examples have been reported by Mr. J.A. Andreu.

In the first case, geotextiles were used to provide separation, filtration and drainage in the construction of the Isle Margarita race track and training track. The race track had a length of 500 m and a width of 6 m. The training track was 200 m long and 7.5 m wide.

The second case relates to potential contamination of adjacent soil by waste mud generated in the drilling of a 5500m deep oil well at Furrial (Anzoategui State). To minimize contamination, two 5000m² collection ponds were constructed and lined with geomembranes. The sides of the pond were reinforced with geotextiles. This particular well has estimated reserves of 4 billion barrels and by 1990 production at this site will reach 100 000 barrels per day.

(Reported by J.A. Andreu)

Kuriyama Reservoir: Progress Report

Professor M. Fukuoka reports that construction work with the PVC geomembrane for the bottom of Kuriyama Reservoir (see Vol. 2, No. 1 of IGS News) is going on smoothly and will be completed in September. The lowest 100 x 100 m area has been filled with water to a depth of about 5m. No sign of leakage has been observed. The filling of the reservoir will start in October 1987.

Publications on Geotextiles and Geomembranes 1986

- ASCE Geotechnical Journal**
Gray, D.H. and Al-Refeai, T. 1986. Behaviour of fabric vs. fiber. Vol. GT112, No. 9. pp. 804-820.
- Construction Today (UK)**
Mandal, J.N. 1986. Tests and strength. April, 1986. p. 28.
- Civil Engineering (UK)**
Hoare, D.J. 1986. Geotextiles, compatibility and use. April 1986. pp. 9-23, 48.
- Anon. 1986. Geotextiles, application on site. June, 1986. pp. 10-23.
- Geotechnical Fabrics Report**
St. Paul, Minn.: Industrial Fabrics Association International. (345 Cedar Building, suite 450, St. Paul, MN, USA, 55101). published bi-monthly)
- Geotextiles and Geomembranes**
Lord, A.E. and Koerner, R.M. 1986. Diffusion of water from soils encapsulated in impregnated geotextiles. Vol 3, No. 1. pp. 3-27.
- Schneider, H.R. and Holtz, R.D. 1986. Design of slopes reinforced with geotextiles and geogrids. Vol 3, No. 1. pp. 29-51.
- van Harten, K. 1986. The relation between specification of geotextiles and their essential properties. Vol 3, No. 1. pp. 53-76.
- Minster, J. 1986. The prediction of long-term geosynthetic strength using cumulative damage theory. Vol 3, No. 1. pp. 77-88.
- Raymond, G.P. 1986. Geotextile application for a branch line upgrading. Vol 3, No. 2/3. pp. 91-104.
- Leshchinsky, D., Volk, J.C., and Reinschmidt, A.J. 1986. Stability of geotextile-retained earth railroad embankments. Vol 3, No. 2/3. pp. 105-128.
- Ayres, D.J. 1986. Geotextiles or geomembranes in track? British Railways' experience. Vol 3, No. 2/3. pp. 129-142.
- Van Santvoort, G.P.T.M. and Troost, G.H. 1986. Enka(R) reinforced sleeperbed. Vol 3, No. 2/3. pp. 143-167.
- Imbert, B. 1986. Geomembranes and geotextiles in track bed structures on the SNCF. Vol 3, No. 2/3. pp. 169-173.
- Martinek, K. 1986. Geotextiles used by the German Federal Railway - experiences and specifications. Vol 3, No. 2/3. pp. 175-200.
- Fluet, J.E. jr. 1986. Geosynthetics and North American railroads. Vol 3, No. 2/3. pp. 201-218.
- Haxo, H.E. jr. 1986. Quality assurance of geomembranes used as linings for hazardous waste containment. Vol 3, No. 4. pp. 225-247.
- Giroud, J.P. and Fluet, J.E. jr. 1986. Quality assurance of geosynthetic lining systems. Vol 3, No. 4. pp. 249-287.
- Dewsnap, D., Grosscurth, M., Ojeshina, A., and Vandervoort, J. 1986. Quality assurance of polyethylene liners. Vol 3, No. 4. pp. 289-307.
- Cadwallader, M.W. and Barker, P.W. 1986. Quality control of flexible membrane liners for waste disposal facilities. Vol 3, No. 4. pp. 309-338.
- Colin, G., Mitton, M.T., Carlsson, D.J., and Wiles, D.M. 1986. The effect of soil burial exposure on some geotechnical fabrics. Vol 4, No. 1. pp. 1-8.
- Dembicki, E. and Siczka, H. 1986. Production and use of geotextiles in Poland. Vol 4, No. 1. pp. 9-19.
- Koerner, R.M., Martin, J.P., and Koerner, G.R. 1986. Shear strength parameters between geomembranes and cohesive soils. Vol 4, No. 1. pp. 21-30.
- Saxena, S.K. and Hsu, T.S. 1986. Permeability of geotextile - included railroad bed under repeated load. Vol 4, No. 1. pp. 31-51.
- Fabian, K. and Fourie, A. 1986. Performance of geotextile-reinforced clay samples in undrained triaxial tests. Vol 4, No. 1. pp. 53-63.
- Rowe, R.K. and Soderman, K.L. 1986. Reinforced embankments on very poor foundations. Vol 4, No. 1. pp. 65-81.
- Den Hoedt, G. 1986. Creep and relaxation in geotextile fabrics. Vol 4, No. 2. pp. 83-92.
- Douglas, R.A. and Kelly, M.A. 1986. Geotextile 'reinforced' unpaved logging roads: the effect of anchorage. Vol 4, No. 2. pp. 93-106.
- Hird, C.C. 1986. Stability charts for reinforced embankments on soft ground. Vol 4, No. 2. pp. 107-127.
- Humphrey, D.N. and Holtz, R.D. 1986. Reinforced embankments - a review of case histories. Vol 4, No. 2. pp. 129-144.
- Profillidis, V. and Poniridis, P. 1986. Visco - elastic behaviour of the soil - geotextile interface: a theoretical approach. Vol. 4, No. 2. pp. 145-153.
- Yamanouchi, T. 1986. Historical review of geotextiles in Japan. Vol. 4, No. 3/4. pp. 165-178.
- Watari, Y. and Higuchi, Y. 1986. Behaviour and analysis of geotextiles used on very soft ground for earth filling works. Vol. 4, No. 3/4. pp. 179-190.
- Kutara, K., Gomadou, T., Takeuchi, T., and Maeda, S. 1986. Deformation analysis of geotextiles in soils using the finite element method. Vol. 4, No. 3/4. pp. 191-206.
- Fukuoka, M., Imamura, Y. and Nishimura, J. 1986. Fabric faced retaining wall with multiple anchors. Vol. 4, No. 3/4. pp. 207-222.
- Sato, M., Yoshida, T. and Futaki, M. 1986. Drainage performance of geotextiles. Vol. 4, No. 3/4. pp. 223-240.
- Tatsuoka, F. and Yamauchi, H. 1986. A reinforcing method for steep clay slopes using a non-woven geotextile. Vol. 4, No. 3/4. pp. 241-268.
- Fukuda, N., Yamanouchi, T. and Miura, N. 1986. Comparative studies of design and construction of a steep reinforced embankment. Vol. 4, No. 3/4. pp. 269-285.
- Watari, Y. 1986. Outline of geotextile group activities in Japan. Vol. 4, No. 3/4. pp. 285-290.
- Proceedings, Indian Geotechnical Conference**
Mandal, J.N. and Dixit, R.K. 1986. Under what situations are geotextiles more effective than traditional method(s) of ground improvement and drainage? ICG-86 Vol. II. New Delhi, 1986. pp. 195-201.
- Proceedings, IIIrd International Conference on Geotextiles**
Vienna: 4 volumes - see IGS Publications for details.
- Transportation Research Board**
Chrismer, S.M. and Richardson, G. 1986. In - track performance of geotextiles at Caldwell, Texas. TRR 1071. pp. 72-80.
- Raymond, G.P. 1986. Installation factors that affect performance of railroad geotextiles. TRR 1071. pp. 64-71.
- Proceedings, 3rd International Symposium on Industrial and Hazardous Waste**
Koerner, R.M. 1986. Use of flexible membrane liners for industrial and hazardous waste disposal. Alexandria, Egypt, ASTM 933. pp. 195-207.

Proceedings, Symposium on Environmental Geotechnology

Koerner, R.M., Martin, J.P. and Lord, A.E. Jr. 1986. Geomembranes in solid waste disposal. Lehigh University, Bethlehem, PA, April. pp. 287-292.

Proceedings, Superfund '86

Lord, A.E., Jr., Koerner, R.M. and Crawford, R.B. 1986. NDT techniques to assess geomembrane seam quality. Washington, DC, HMRCl. pp. 272-276.

Books

Koerner, R.M. 1986. Designing with geosynthetics. Prentice-Hall. 424 p.

Veldhuijzen van Zanten, R. (ed.) 1986. Geotextiles and geomembranes in civil engineering. Balkema. 658 p.

Reports

Koerner, R.M., Fowler, J. and Lawrence, C.A. 1986. Soft soil stabilization study for Wilmington Harbour south dredge material disposal area. U.S. Army Corps of Engineers, WES, Misc. Paper GL-86-38. 81 p.

Handbook

Swiss Association of Geotextile Specialists. 1986. Geotextile handbook (in German). Vogt-Schild, A.G., CH-4001 Solothurn, Switzerland.

Ph.D. Theses

Soderman, K.L. 1986. The behaviour of geotextile reinforced embankments. Ph.D. Thesis, Univ. of Western Ontario, London, Canada. 239 p.

Did we miss your publication in 1986 or do you have a 1987 publication? If you would like it listed in the next issue, please send details to

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IGS Publications

First International Conference

"Proceedings of the International Conference on the Use of Fabrics in Geotechnics" (Three Volumes)
to be ordered from:
ENPC, Service Formation Continue, 28 rue des Saints Pères, 75006 Paris, France

Second International Conference

"Proceedings of the Second International Conference on Geotextiles." (Four Volumes)
Price: \$72 plus postage to be ordered from:
IFAI, 345 Cedar Building, Suite 450, Saint Paul, MN 55101, USA

Third International Conference

"Proceedings of the Third International Conference on Geotextiles" (Four Volumes)
Price: US\$ 128 for America, 300 hfl for the rest of the world to be ordered from:
IFAI (see address above), for America, or, for the rest of the world, from:
BALKEMA, Postbus 1675, NL-3000 BR Rotterdam, Netherlands

The publications listed below can be ordered from
IGS Secretariat, 51 Avenue des Cerisiers, 1040 Brussels, Belgium

Directory of Members 1987

Name, address, telephone, telex and telecopy number of all IGS members as of 30 June 1987. All IGS members will be receiving a free copy \$10 per additional copy for members - Price for nonmembers \$15

Geotextile Testing Inventory 1986

A 217-page compilation of geotextile test methods used in 13 countries. Price for IGS members \$60, Price for nonmembers \$90

Symbols for Geotechnical Engineering, Geotextiles and Geomembranes

A list of symbols adopted by the IGS for the Third International Conference on Geotextiles.
Free for IGS members, Not available to nonmembers

Information Sources

— ICOLD Publication No. 55 - Geotextiles as Filters and Transitions in Fill Dams \$US18.

The use of geotextiles has quickly developed in fill dams during the last decade. This bulletin mentions first the various possible utilizations of geotextiles in dam construction and explains the basic principles of filtration and the differences between geotextiles and conventional filters. A useful guide for those having to design a filter or a transition zone.
Available from: U.S. Committee on Large Dams, Prudential Center, Boston, MA 02199 U.S.A.

— Kisoko (Foundation Engineering), a special issue on geotextiles. This special issue (in Japanese) contains articles on stabilization of cuts using tensile reinforcement; the use of geotextiles and geogrids in retaining walls and the design and construction of embankments using non-woven geotextiles.

— Proceedings of the 1st National Symposium on Geotextiles in Soil and Foundations. (1. Nationales Symposium Geotextilien in Erdund Grundbau) Mainz, 1984, in German. Contact: Professor Dr. Ing. Rudolf Floss, Lehrstuhl für Grundbau, Bodenmechanik U. Felsmechanik, Baumbachstrasse 7, 8000 Munchen 60, Germany.

Proceedings of Geosynthetics '87

Contains approximately 60 papers presented in New Orleans, February 1987.
Available from: IFAI 345 Cedar Building, Suite 450, St. Paul, MN 55101, USA Cost \$50 + postage.

Research Activity and Graduate Theses

To provide a medium for improving co-ordination and possible co-operation in research, it is planned to include a section on research activity in the next issue of the IGS Newsletter. Researchers and Institutions are hereby requested to send the editor a short description of current and

future research activities related to geotextiles for inclusion in this report. We would also like to publish a list of theses (M.S. or Ph.D.) which have been written on geotextiles. Former students and/or their supervisors are invited to send details of the theses to the editor on a continuing basis.

Calls for Papers

IGS Affiliation with Geotextiles & Geomembranes

An agreement has now been signed between the IGS and Elsevier Applied Science Publishers and thus from the beginning of 1987 the international journal **Geotextiles & Geomembranes** becomes an official journal of the IGS. Individual IGS members may now obtain a subscription to the journal at a discount of 40 percent off the list price. Such reduced subscriptions are available directly from the publisher:

Subscription Department
Elsevier Applied Science Publishers
Crown House
Linton Road
Barking
Essex IG11 8JU
United Kingdom

The editor, T.S. Ingold, the Editorial Board Chairman, J.P. Giroud and the IGS Editorial Board Representative, K. van Harten, hope that IGS Members will use **Geotextiles & Geomembranes** as an outlet for their technical papers and thus contribute toward the continuing success of this high quality publication, which now has subscribers in over 40 countries worldwide. Papers should contain work not published in full elsewhere and should be sent to:

Dr. T.S. Ingold
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(Instructions to authors are also available from Dr. T.S. Ingold)

Kyushu International Geotechnical Symposium on Theory and Practice of Earth Reinforcement

Fukuoka, Kyushu, Japan
5-7 October, 1988
Themes: Theory; Design; Construction; Materials; Monitoring Systems
Language: English
Abstract Due by: October 31, 1987
Paper Due by: April 30, 1988
Contact: Secretariat of IS Kyushu '88
Professor Norihiko Miura
Department of Civil Engineering
Faculty of Science and Engineering
Saga University, 1 Honjo, Saga 840, Japan
Telephone: (0952)24-5191, ext. 2576, 2580
Facsimile: (0952)24-4253

First Indian Geotextiles Conference, 1988 (FIGC-1988)

Bombay, India
8-9 December, 1988
Themes: Properties and Laboratory Evaluation; Ground Restraintment/Stabilization; Reinforced Soil; Slope Protection/Erosion; Drainage and Filters; Special Applications or Problems.
Language: English
Abstract Due by: December 30, 1987; 300 words
Paper Due by: June 15, 1988
Contact: Dr. J.N. Mandal
Organising Secretary
First Indian Geotextiles Conference
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Editorial Request

Please send good black and white photos!

The value of a newsletter lies not only in the basic articles but in the presentation of useful and up-to-date information. We ask all members to provide information that they feel will be of interest to other members. Such information would include:

Technical News
Calls for Papers
Announcements of Conferences and Short Courses
Lists of Recent Publications and Proceedings
Items for the Calendar of Events
Interesting Glossy Black and White Photographs
Unique Uses of Geotextiles or Geomembranes
Cartoons
Letters of Opinions, etc.

Please do not hesitate to provide information because you feel everybody must know of it already. If we hear of something two or three times that does not hurt us. What hurts us is if all three of the people think that someone else will tell us and then we never find out!

The editorial deadline for the next edition of the newsletter is 23 October, 1987 but you do not have to wait until then, avoid the rush, act now and send your information to:

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U.S.A.

Calendar of Events

Short Course:

Designing With Geosynthetics

Philadelphia
3-4 September, 1987

Chicago

10-11 September, 1987

San Francisco

17-18 September, 1987

Contact: Ms. Marilyn Macklin
Geosynthetic Research Institute
Drexel University
Philadelphia, PA 19104 U.S.A.

RILEM Conference

From Material Science to Material Engineering

Paris, France

7-11 September, 1987

Contact: RILEM General Secretariat
12 rue Brancion
75737 Paris CEDEX 15, France

Geosynthetics: Pavement Applications

Nottingham, U.K.

22 September, 1987

Contact: B.D. Tribbick
Dept. of Civil Engineering
University of Nottingham
Nottingham NG7 2RD U.K.

Canadian Geotechnical Conference

Regina, Canada

19-21 October, 1987

Contact: Mr. John Oosterveen
3250 Margret Road
Regina, Saskatchewan S4V 1G6, Canada

Seminar: Very Soft Soil Stabilization Using High Strength Geotextiles

Philadelphia, U.S.A.

22-23 October, 1987

Contact: Ms. Marilyn Macklin
(215) 895-2350

Conference on Geotextiles

Singapore

28-30 October, 1987

Contact: Dr. S.D. Ramaswamy
National University of Singapore
102 Eng Neo Avenue, Singapore

Geosynthetics for Soil Improvement

Nashville, Tennessee, U.S.A.

9-11 May, 1988

Contact: Prof. R. Holtz
School of Civil Engineering
Grissom Hall
Purdue University
West Lafayette, IN 47909, U.S.A.

2nd International Conference on Case Histories in Geotechnical Engineering

St. Louis, U.S.A.

1-5 June, 1988

Contact: Prof. S. Prakash
Dept. of Civil Engineering
University of Missouri-Rolla
Rolla, MO 65401-0249, U.S.A.

Hydraulic Fill Structures '88

Fort Collins, Colorado

14-17 August, 1988

Contact: J.L. Montera
Dept. of Civil Engineering
Colorado State University
Fort Collins, CO 80523, U.S.A.

International Geotechnical Symposium on the Theory and Practice of Earth Reinforcement

Kyushu, Japan

October, 1988

Contact: Prof. N. Miura
Dept. of Civil Engineering
Saga University
Saga 840, Japan

First Indian Geotextiles Conference

Bombay, India

8-9 December, 1988

Contact: Dr. J.N. Mandal
Organising Secretary
FIGC-88
Civil Engineering Department
IIT. Powai, Bombay - 400 076, India

Twelfth International Conference on Soil Mechanics and Foundation Engineering

Rio de Janeiro, Brazil

13-18 August, 1989

Contact: Prof. Costa Nunes
12th ICSMFE
Caixa Postal 1559
20000 Rio de Janeiro, RJ, Brazil

Fourth International Conference on Geotextiles, Geomembranes, and Related Products

The Hague, The Netherlands

27 May-1 June, 1990

Contact: Prof. K. van Harten
University of Technology, Delft
2 Mekelweg
P.O. Box 5036
2600 GA Delft, The Netherlands

Note: Highlighted items are organized under the auspices of or with the support of the IGS.

List of Corporate Members

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OBJECTIVES OF IGS (*)



The International Geotextile Society was formed with the following objectives:

- (1) to collect, evaluate and disseminate knowledge on all matters relevant to geotextiles, geomembranes, and related products;
- (2) to improve communication and understanding regarding geotextiles, geomembranes and related products, as well as their applications;
- (3) to promote advancement of the state of the art of geotextiles, geomembranes and related products as well as their applications;
- (4) to encourage through its members the harmonization of test methods, equipment and criteria for geotextiles, geomembranes and related products.

MODE OF ACTION OF IGS

- | | |
|---|---|
| <ul style="list-style-type: none"> - promotion of seminars, symposia and conferences - publishing or sponsoring of papers, books or journals - publishing a Newsletter to appear three times a year - establishing liaison with other groups or bodies which could have an interest in geotextiles, geomembranes and related products as well as their applications - encourage research and development in Industry, Universities, Laboratories and other organizations | <ul style="list-style-type: none"> - encourage academic institutions to provide courses on geotextiles, geomembranes and related products - afford recognition of achievement in the advancement of the science and practical use of geotextiles, geomembranes and related products - establishment of international technical committees on topics of importance. |
|---|---|

EXAMPLES OF IGS ACTIVITIES

- | | |
|---|--|
| <ul style="list-style-type: none"> - Publication of the IGS Directory - Publication of a list of symbols for geotextiles and geomembranes (1985) - Publication of the Inventory of Geotextile Testing methods (1986) - Third International Conference on Geotextiles held in Vienna, Austria (April 1986) | <ul style="list-style-type: none"> - Geosynthetics '87, US national conference organized under the auspices of the IGS (February 1987). - Fourth International Conference on Geotextiles to be held in The Hague, Netherlands, in 1990. - Committees working on: Terminology, Standards, Publications, Education, Research and Conferences. |
|---|--|

MEMBERSHIP APPLICATION

Membership of the Society is open to Individuals or Corporations "...engaged in, or associated with, the research, development, teaching, design, manufacture or use of geotextiles, geomembranes and related products or systems and their applications, or otherwise interested in such matters".

The annual fee for membership is (US) \$30 for Individual Members and (US) \$1000 for Corporate Members. Individuals or corporations who voluntarily contribute a minimum of (US) \$200 annually to the Society, in excess of their membership dues, will be mentioned in the IGS Directory in a separate list as benefactors.

The following form may be used to apply for membership and sent to:

For application in North & South America

Mr. P.E. Stevenson
Treasurer, IGS
c/o James River Corporation
Route 4, Box 607
Easley, SC 29640
U.S.A.

for Other Countries:

Mr. Guy Massenaux
Secretary, IGS
c/o EDANA
51 Avenue des Cerisiers
B-1040 Brussels
BELGIUM

NAME

ORGANIZATION

ADDRESS (Street or Postal Box)

City Province/State

Postal Code Country

TELEPHONE TELEX FAX

ELIGIBILITY (i.e. evidence of suitable connection with geotextiles
.....

- Membership fee – Individual (US) \$ 30.00
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- Benefactor's contribution (at least (US) \$200): _____

TOTAL: _____

Mode of payment – A check is enclosed The applicant hereby agrees to pay the above total amount upon receipt of an invoice

SIGNATURE DATE

* A copy of the bylaws is available upon request.

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