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N. Z. I. E.

news section

A supplement to "New Zealand Engineering" sent to all members of the N.Z. Institution of Engineers
President: E. W. de Lisle, M.Sc.(Hons), C.Eng., F.I.E.E., F.N.Z.I.E.
Secretary: R. W. K. Stevens, C.B.E.

The Secretary's Newsletter

MEMBERSHIP RECORDS

As a part of the process of transferring the Institution's membership records to computer, an effort is being made to make these records as accurate as possible. To this end, members were sent a form on which they were asked to indicate the branch of engineering in which they are currently employed and their field of employment. The return from members was not as good as was hoped—about 60%—and, although some of the gaps can be filled from information already available, the final records will not be as accurate as we would like them to be.

FORMATION OF THE ELECTRO-TECHNICAL GROUP

Members will recall that some years ago the Council approved the formation of a technical group of the N.Z.I.E. to be called the Electronics Group. For a number of reasons this group never got off the ground, and, after consideration of the replies to a questionnaire circulated to all members in the electrical engineering field, it was decided to widen the scope of the proposed group and cover the whole field of heavy power, light current, and electronic engineering.

Following a general meeting held in Wellington, it became evident that there would be sufficient support to justify the submission to the Council of a request for approval to the formation of a new group. A steering committee was elected, draft rules drawn up, and the requisite signatures obtained.

The Council in due course approved the requisition, the draft rules, and the name of the group—the Electrotechnical Group. A meeting of all members interested in membership of the group will be held during the 1974 N.Z.I.E. conference in February next. At this meeting a management committee will be elected and a programme of activity for 1974 approved in outline.

Members in the electrical engineering field are requested to make a special

point of attending this meeting, the time and place of which will be publicised in the conference programme.

HAWKE'S BAY BRANCH ACTIVITIES

Engineers' discussion group

The following article has been received from the Hawke's Bay branch:

A group of clergymen meeting in Napier, who were concerned about some of the trends in our society, decided to float an experiment with a selected occupational group in Napier. Their concern focused more particularly on the impact of applied technology on people, their environment, and their lives. They decided to convene a small group from a common profession and to ask them to talk about their daily jobs in the widest context, from the national scene down to their personal setting. The group was to be given no directions, no set objective, and an absolute minimum of comment from the initiators, who would sit in the background and observe the outcome. The clergymen chose the engineering profession and approached the few professional engineers known personally to them. The response was satisfactory and a group, initially numbering about eight and expanding for various reasons to about 13, met over lunch on five occasions.

Right from the start, it was clear that the engineers present not only had no difficulty at all in finding common ground in discussion but also that they were worried about technical, political, and social aspects of our society which, as engineers, they felt particularly aware of. All meetings following the first meeting were held voluntarily, and the motivating force was essentially the common force. Discussion was frank and open.

After the second meeting, one of the observers compiled a summary of his impressions which was accepted by all as exceptionally apposite. Part of it is repeated as follows:

"After listening to two discussion sessions, it seems that engineers fall into three broad categories—the optimists, the pessimists, and those who are both. The optimists believe in the power of technology to overcome present human problems and future threats to man's survival. They also believe in the wisdom of engineers and the decision-makers to apply technology for the good of mankind. The pessimists haven't too much faith in technology, and have even less faith in the decision-makers, because of the way they see technology applied.

"In between there is a group who recognise the potency of technology to solve man's problems, but who are pessimistic about actual performance. A number of factors were identified as obstacles to be overcome if in fact technology is to fulfil a saving function in our world, i.e., making possible health and wholeness of life. These were: the compulsive desire for progress (the numbers game); the pressure of population growth; the profit motive of the capitalist system; the innate selfishness (sin) of John Citizen, who always wants more and who lives in a society that encourages him to want more; the inability of individuals and groups in society to make desirable long-term plans and short-term sacrifices; the increasing specialisation of engineers, which reduces a person to a cog in a system and tends to remove him from the centre of decision making; and the failure of engineers as a group to articulate their concerns, to influence public opinion, and to set their work in the context of an ethical system.

"Some seemed to think that bad application of technology cannot be blamed on a particular group of people (e.g., politicians, financiers) or a particular system (consumer-oriented capitalism), but on mysterious demonic forces at work in the total situation. There is some deep distortion in societal values difficult to isolate or define, but nevertheless real.

"The conclusion I would draw from all this is that the technological problem,

like all human problems, is basically an ethical/spiritual problem, a problem of fundamental values, the problem of man himself to act responsibly. And any understanding of the technological problem must take into account the power of evil."

The group decided unanimously that it wished to attempt to respond to the concern which they shared. The following three discussion sessions were spent in attempting to define proposed future actions which could be taken. A significant number of ideas were floated, from which the following were selected and adopted:

(1) That the local branch of the N.Z.I.E. be requested to get the N.Z.I.E. to adopt the theme, "Engineers—between technology and society", for the next available N.Z.I.E. conference.

(2) That attempts be made via the local branch of the N.Z.I.E. to get the Institution to establish a capacity on the national scene to become vocal on politically apposite matters. An illustration of this would be to have paid Institution staff making submissions to select committees of Parliament.

(3) That the local branch of the N.Z.I.E. be requested to establish locally the capacity to consider quickly and effectively matters of local interest about which engineers could be expected to exert a constructive and significant influence.

The last meeting of the group decided that to administer effectively the intention of the last recommendation the organisation established should be: part of the local branch N.Z.I.E.; completely flexible in its ability to take action; and able to reach any member.

The branch committee meets these criteria well, and the group suggested that the committee be used to convene meetings, etc., to discuss issues of concern to members.

SEASONAL GREETINGS

The secretary and staff of the Institution wish all members a very happy Christmas and a satisfying and trouble-free new year.

EXAMINATION REGULATIONS REVISED

1973 edition now available

The 1973 issue of handbook No. 2, *The Examination Regulations*, was approved by the Council at its meeting in October. The revised handbook incorporates the education policy of the Institution, published in the February 1973 issue of the journal, and brings the examination regulations of the Institution in line with the new rules for the C.E.I. examination, given publicity in these pages in March 1973. These amended rules will apply to the examinations to be held in May 1974 and subsequently.

The subject lists for the Part 2 examination are also amended, and the lists of subjects that can be chosen by students in the various major engineering disciplines have been revised accordingly.

Another major change in the regulations concerns the supplementary subjects to be taken by holders of N.Z.C.E.

with "outstanding merit". The lists of these subjects have been revised to give greater breadth to the studies of these candidates before they undertake the specialist Part 2 subjects.

Copies of the revised handbook are now available from the secretary, P.O. Box 12241, Wellington.

Changes in the Roll of Members

The following additions to and changes in the Roll of Members result from recent decisions of the Council, subject to confirmation under the provisions of rule 7.1 where applicable.

ADDITIONS

Members

- M. J. B. Chalmers, B.E.(Hons)(Civil), M.I.E.Aust., 22 Second Street, Masterton.
- M. R. Clayton, Associate Member of I.E.E., N.Z.E.D. Private Bag, Ruakaka.
- M. K. W. Dumper, B.E.(Civil), M.I.E.Aust., 26 Bert Wilson Place, Howick.
- M. W. R. Faithful, M.I.Mun.E., M.I.E.Jamaica, M.A.S.C.E., 33 Marion Avenue, Mt. Roskill, Auckland.
- M. W. G. Ferguson, B.Sc., B.E.(Hons)(Mech), Ph.D., M.A.S.M., 296 Blockhouse Bay Road, Auckland 7.
- M. J. L. Kramer, B.Tech.(Mech), M.I.E.Aust., 9 Paritutu Road, New Plymouth.
- M. R. T. Phillips, B.Sc.(Aston), M.I.C.E., 12 Clematis Grove, Maungaraki, Lower Hutt.
- M. G. H. Railton, B.Sc., M.I.E.R.E., 7 Konini Grove, Raumati Beach.
- M. A. C. Rudd, M.I.Struct.E., 247 St. Johns Road, Remuera, Auckland 5.

Associates

- Assoc. I. A. McGregor, A.M.N.Z.I.M., M.N.Z.I.E.T., 7 Halswater Drive, Churton Park, Wellington 4.
- Assoc. L. Sweers, A.M.I.H.V.E., Korte Singel 50, Bussum, Holland.
- Assoc. A. J. Watton, M.N.Z.I.D., 24 Magdalen Crescent, Napier.

Graduates

- Grad. D. E. Asbey-Palmer, B.E.(Civil), 1 Mountain Road, Whangarei.
- Grad. W. J. E. Clarke, B.E.(Civil), Marks, Stiles and Sedcole, 169 London Street, Hamilton.
- Grad. I. R. Lawrence, B.E., M.E.(Mech), Lardners Road, Tisbury, Invercargill.
- Grad. W. J. Oulsnam, B.E.(Hons)(Civil), 86 Pitt Street, Wanganui.
- Grad. M. R. Tracy-Inglis, B.E.(Hons)(Civil), 1A Corrella Road, Belmont, Auckland 9.

Students

- Stud. R. L. McDowall, 633 Remuera Road, Auckland.
- Stud. P. T. Tupou, Tonga E.P.B., P.O. Box 47, Nukualofa, Tonga.

PROMOTIONS

Member to Fellow

- F. J. C. Scrivener, B.Sc., B.E.(Civil), M.E., D.I.C., Ph.D., School of Engineering, University of Canterbury, Private Bag, Christchurch.

Graduates to Members

- M. K. D. Birt, BE.(Elect), P.O. Box 362, Papakura.
- M. R. J. Buchan, B.E.(Civil), 45 Mountfort Street, Christchurch 2.
- M. A. H. Curtis, 11 Pukerangi Crescent, Auckland 5.
- M. D. G. Goring, B.E.(Hons)(Civil), 16 Mary Huse Grove, Manor Park, Upper Hutt.
- M. W. R. Miller, BE.(Civil), Flat 10, 55A Hepburn Street, Auckland.
- M. G. T. Neil, B.E.(Hons)(Elect), Associate Member of I.E.E., Planning and Development Section, Engineer-in-Chief's Office, P.O.H.Q., Wellington.
- M. B. J. Ridler, B.Sc.(Eng)(Hons), Associate Member of I.Mech.E., J. J. Niven and Co., Airconditioning and refrigeration division, Box 2096, Wellington.
- M. G. R. Sivyer, B.E.(Elect)(Hons), Messrs. Petersen, Sivyrc, Hubbard and Thompson, P.O. Box 103, Palmerston North. (This member overseas.)
- M. T. J. D. Taylor, B.E.(Hons)(Civil), 36 Kahikatea Drive, Hamilton.
- M. G. B. Walford, B.E.(Hons)(Civil), Ph.D., F.R.I., Private Bag, Rotorua.
- M. F. E. Wharton, B.E.(Hons)(Mech), Shell Oil (N.Z.) Ltd., Shell House, The Terrace, Wellington.
- M. C. J. Will, B.E.(Civil), 6 Wright Avenue, Swanbourne, Perth, W.A. 6010.

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Engineering

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Secretary, R. W. K. STEVENS, C.B.E.

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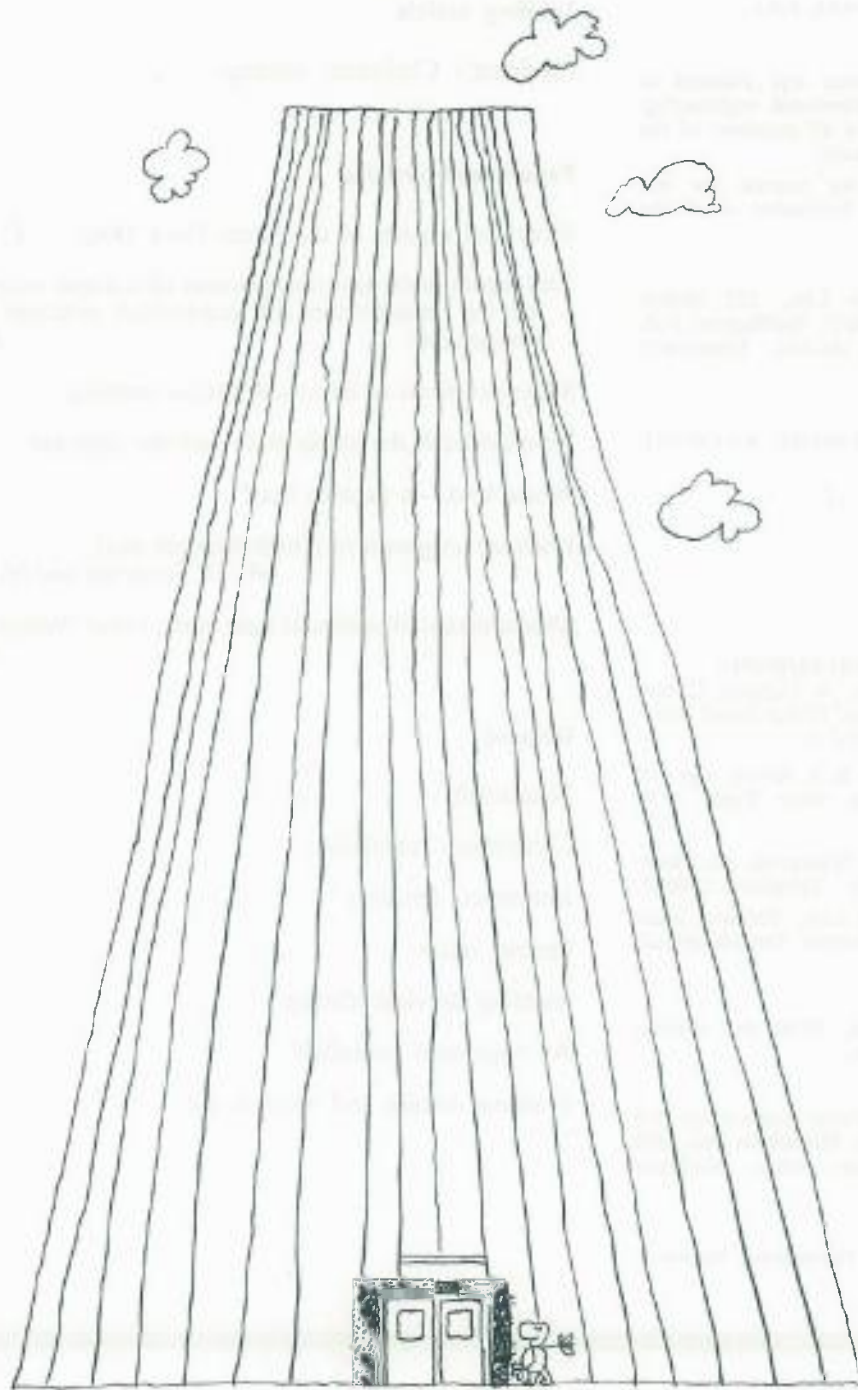
Cover picture

James Cook Hotel, Wellington, showing the parking building on which the hotel was constructed—see page 345.

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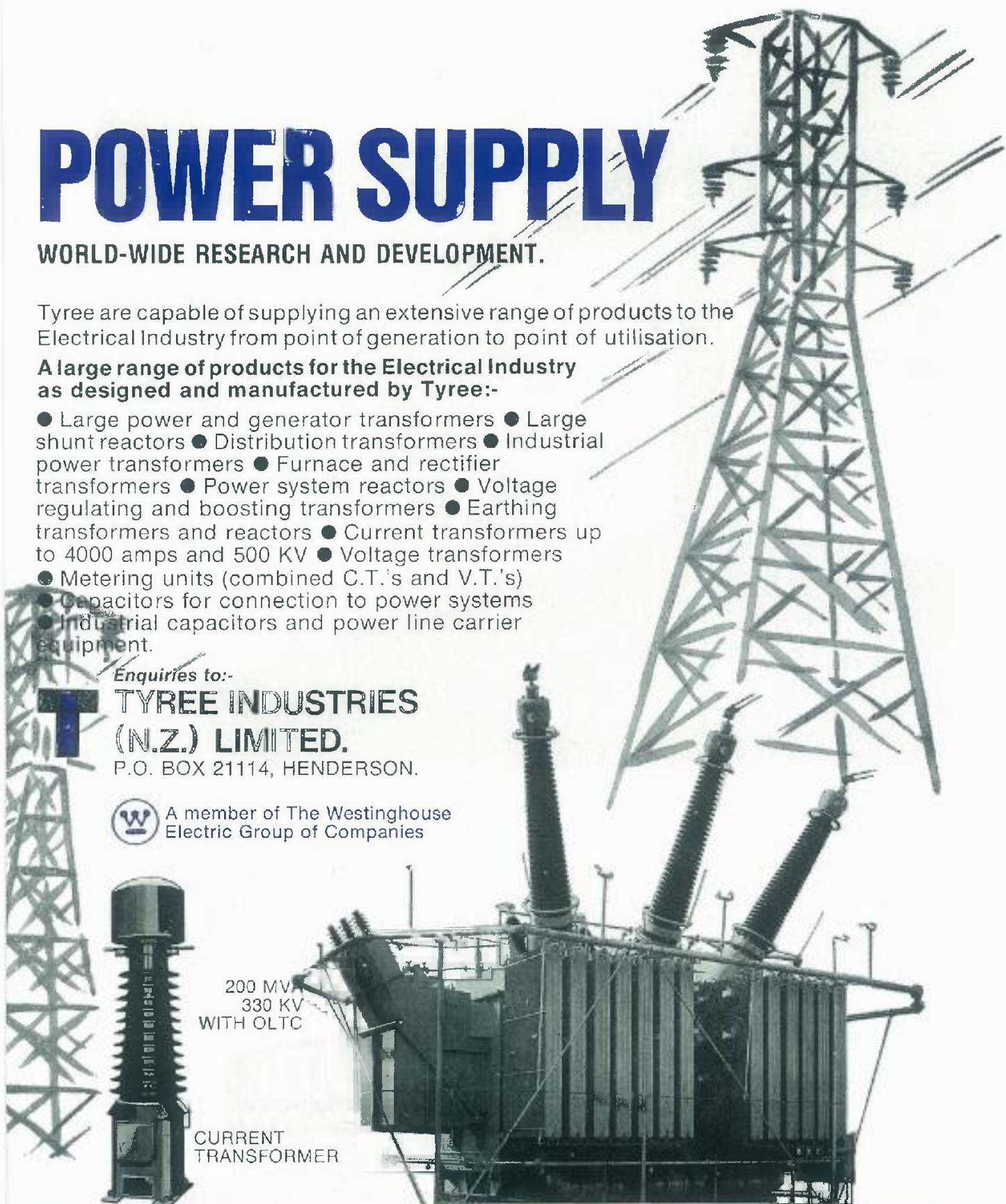
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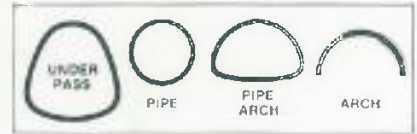
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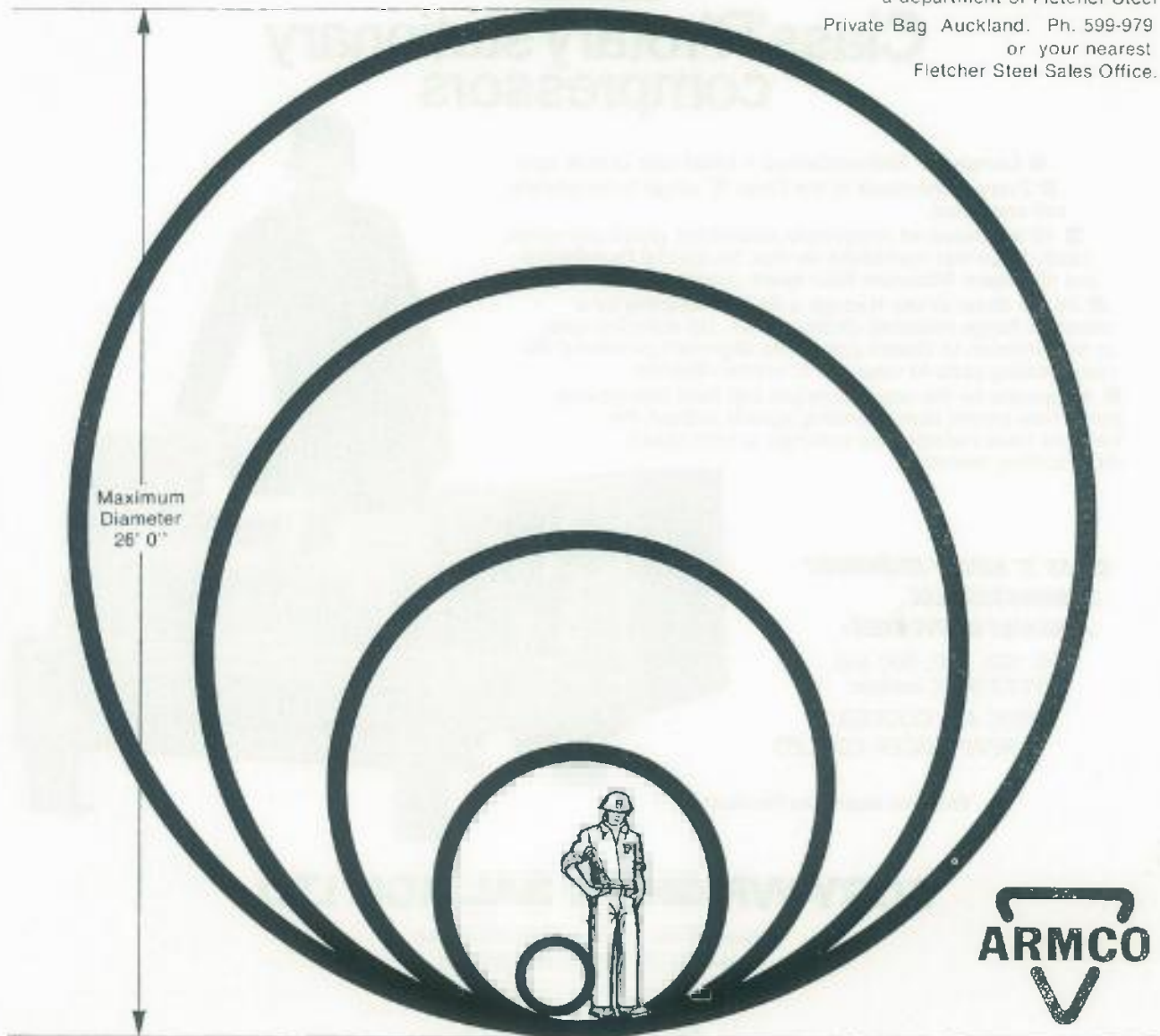
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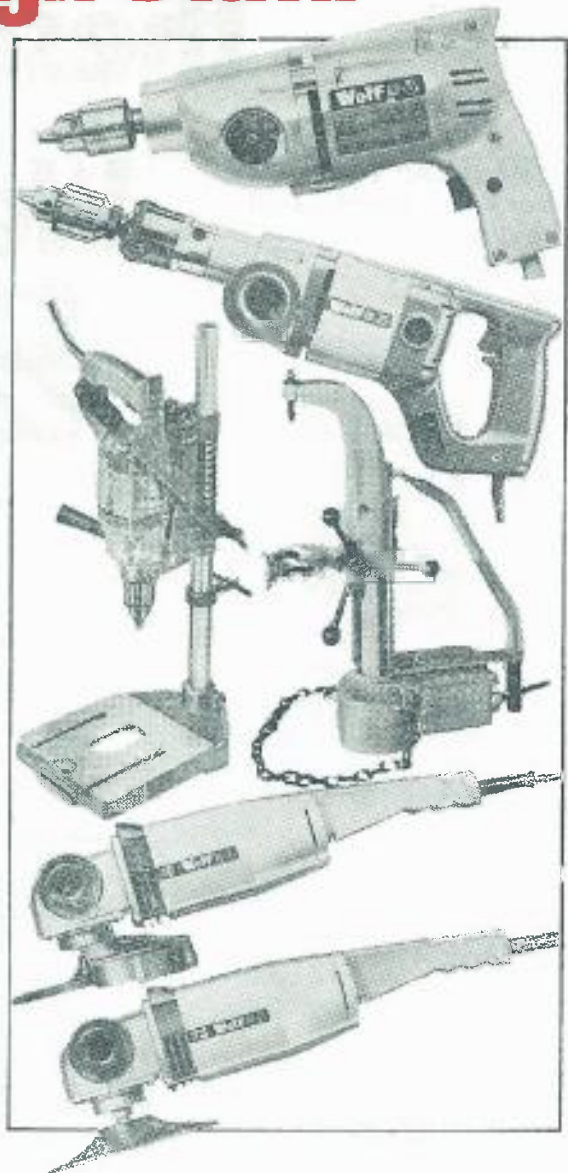
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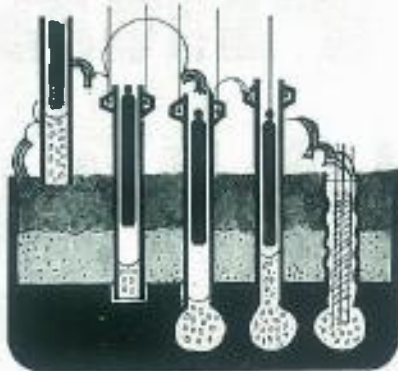
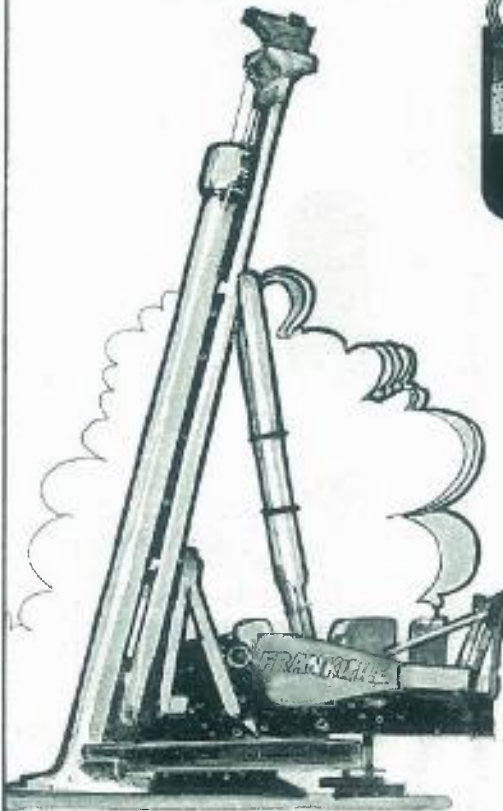
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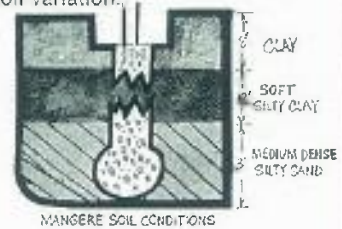
The key to the Franki system is the dynamic compaction of semi-dry concrete to form an Enlarged Base Pile having a shaft diameter of 16", 18" and 20" and capable of supporting loads of 100 tons and more per unit.

To date, some four multi-storey buildings on the Christchurch University site alone have been founded on Franki 'Cast-in-Situ' DRIVEN Piles. Basically, the pile is formed by dragging a steel tube into the ground by means of repeated blows of an internal drop hammer. Once a satisfactory bearing stratum is reached, an enlarged base of semi-dry concrete is hammered out into the sub-stratum.

On completion of basing, the reinforcing cage is introduced and the concrete pile shaft forged as the tube is slowly withdrawn.



The enlarged base characteristic generally means that a Franki system pile can be installed to a lesser depth than conventional piling for equivalent load capacities. The 'Cast-in-Situ' feature completely eliminates wastage of materials, time and labour through sub soil variation.

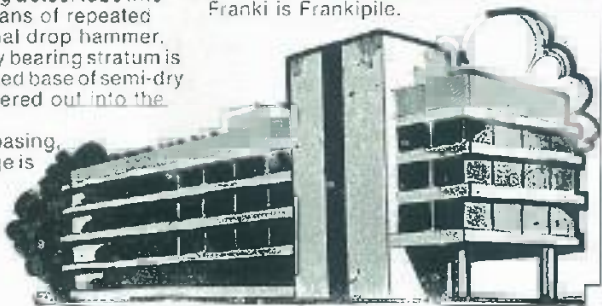


But the Franki system is not just a driven pile. The Mangere Telephone Exchange building is founded on the Franki 'Cast-in-Situ' BORED Pile. This pile type offers economic advantages where sites are congested, have no easy access or are in the proximity of occupied buildings. The specialised boring technique reduces vibration, noise and rig height requirements to a minimum whilst still maintaining all the advantages of the enlarged base. Under test on the Mangere site, these piles successfully carried a 110 ton loading.

Franki is now in business in a big way in New Zealand and has successfully completed some 30 contracts to date.

The company has the international associates, equipment, facilities and staff to provide the most suitable and advanced piling for any size of contract in the country. Not just their own systems, but the full range of Pre-formed Piling, Bored Piling and ground improvement. Franki service includes specifications, technical drawings, preliminary cost estimates, advice and actual installation.

Have Franki sort out your foundations. Franki is Frankipile.



FRANKIPILE NEW ZEALAND LIMITED
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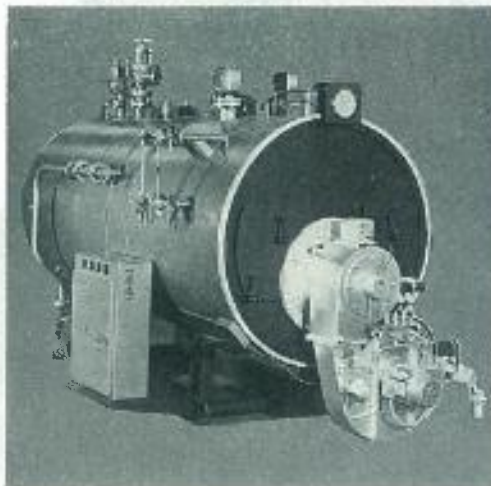


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