

In its first nine months—in addition to work done for the Atomic Energy Authority—it has won industrial contracts worth over £22,000.

There are, of course, no surer signs that a subject has got off the ground than proliferation of journals devoted to it and arguments about its definition. In January 1968, *Tribology*, the first British journal devoted to the subject, began publication. A little later the first abstracting journal *Tribos* appeared. This year it is proposed to introduce an annual review of tribology and a *Tribology International Diary of Events*. Apparently academics are just as unsure about the boundaries of tribology as they are about the boundaries of molecular biology, and the ministry's advisory committee has therefore come up with the definition "the science and technology of interacting surfaces in relative motion and of related subjects and practices". That ought to be wide enough to include everyone who wants to be included.

SHIPS

More Scope for NERC

from a Special Correspondent

AFTER all the politicking (*Nature*, 218, 999; 1968), the Natural Environment Research Council's Research Vessel Unit has settled down well at Barry, Glamorgan. The unit's principal vessel, the 2,600 ton RRS *Discovery*, docked at Barry for the first time on March 28 on her return from a two month Mediterranean cruise—one could almost say "amidst scenes of public rejoicing". The event, which coincided with a beautiful sunny day, was made the occasion for an official welcome by the Mayor of Barry and senior members of the British Transport Docks Board (as well as NERC) and the tug that brought in the *Discovery* was dressed overall.

There is no doubt that Barry is delighted to have the unit, which will have much more scope there than at Millbay Docks, Plymouth—the unit's handling port for many years—where it had to hire berths ship by ship. At Barry, the unit has a 1,000 foot deep-water quay at No. 1 Dock and five acres of land which will provide space for extensive stores, workshops and offices for servicing equipment between cruises and rapid replenishment. Building has already started. No. 1 site is being let on a long lease, and though the negotiations are not complete it is expected that the terms will be easy. Barry Docks, built as an alternative coal port to Cardiff by the Rhondda coal tycoon David Davies in the 1880s and at one time with over thirty coal heads, is now under used with the decline of the coal industry. NERC's Research Vessel Unit will not be more profitable, but it may put Barry Docks back on the map.

The quay is long enough for four ships of the same size as the *Discovery* to tie up simultaneously and there are also moorings out in the basin. It seems likely that Barry may fairly soon be handling quite a research fleet for NERC. It is expected that the Antarctic expedition ships will in due course use Barry instead of Southampton. Another ship similar to the *Discovery* is in view for NERC though its specifications have yet to be settled, and there is already another vessel on order comparable with the *John Murray* (about 500 tons).

MEDICAL STATISTICS

More Mothers Survive

BETWEEN 1964 and 1966, twenty-six in every 100,000 pregnant women in England and Wales died as a result of their pregnancy. In the three years there was a total of 671 deaths directly as a result of pregnancy and a further 159 as a result of disease which occurred during pregnancy or childbirth. During the same period there were 2,630,150 births. Six out of every twenty-six deaths occurred during or after illegal abortions. Analysis of these crude figures, reported in *Report on Confidential Enquiries into Maternal Deaths in England and Wales, 1964-66* (HMSO, 10s 6d) further emphasizes the dangers of illegal abortion. More than a third of all deaths which resulted from avoidable factors were abortion cases.

In general, however, maternal survival has improved greatly since the early fifties, when between 65 and 71 of every 100,000 pregnant women died. And even the illegal abortionists improved their record over the same period from 13 out of 67 deaths per 100,000 in 1952, to 6 out of 26 deaths per 100,000 in 1966. The steadily improving survival rates for pregnant women are correlated with the steadily increasing proportion of births occurring in hospitals, which has risen from 65 per cent in 1961 to 75 per cent in 1966. The table shows the chief causes of deaths resulting from pregnancy.

	1955-57	1958-60	1961-63	1964-66
Abortion	141	135	139	133
Pulmonary embolism	157	132	129	91
Haemorrhage	138	130	92	68
Toxaemia	171	118	104	67
All other causes	254	227	228	220
Total	861	742	692	579

The survey shows that a woman is at least risk if she has her first child between the ages of 20 and 25 and if she completes her family before she is thirty. A fifth and subsequent pregnancy at any age is more risky, and a woman having her first pregnancy when she is forty or older requires, according to Sir George Godber, Chief Medical Officer, "very special care from doctors and midwives".

In the United States the maternal death rates are slightly higher than in Britain; the latest figure available is for 1967 when 28.9 in every 100,000 women died, but this average figure conceals a large difference between death rates among white and coloured women. Between 1963 and 1965 the death rate for white women of all ages was 22.4 per 100,000 while for coloured women the corresponding figure was 90.2. Three Scandinavian countries, Sweden, Denmark and Norway, have the lowest maternal death rates, 20, 20.6 and 21.7 per 100,000 respectively.

MECHANICAL ENGINEERS

Mergers in the Air

THE slow process of rationalization in the British engineering institutions will have moved forward a further notch this week—the chances are that the Institution of Locomotive Engineers will finally merge with the Institution of Mechanical Engineers. The mechanicals approved of the merger at an extraordinary

general meeting last week, and the locomotive engineers were all set to do the same at a similar meeting this week. The Institution of Locomotive Engineers differs from the larger body in which it is likely to dominate the Railway Division by being a learned society rather than a professional association, and a great many members of the one are already professionally qualified members of the other. What seems to have happened is that economic pressures have now persuaded the locomotive engineers that they could operate more effectively from the influential base which the Institution of Mechanical Engineers will provide. No doubt the locomotive engineers have also been influenced by the increased status which has accrued to those engineering institutions which belong to the Council of Engineering Institutions, and whose corporate members can now call themselves Chartered Engineers, or C.Eng. for short. The small proportion of the members of the Institution of Locomotive Engineers who are professionally unqualified will not immediately acquire this privilege; until they win approval, possibly by examination, such members will not be corporate members of the Institution of Mechanical Engineers.

The tortuous character of these relationships is proof of the chequered history of the institutions—the locomotive engineers were formed in 1911 as a splinter group from the Stephenson Society in much the same way that in 1847 Stephenson himself led the railway builders and their associates out of the Institution of Civil Engineers to form what is now the Institution of Mechanical Engineers. Since then, engineering institutions have proliferated, and it seems to be uncommonly difficult to bring them into harmony. The Institution of Heating and Ventilating Engineers, for example, is still out in the cold, neither a member of the Council of Engineering Institutions nor an affiliate of the Institution of Mechanical Engineers. It is now more than a year since talks of a merger between the two bodies broke down, with a good deal of genteel recrimination, and the heating and ventilating engineers have since been pushing ahead with their application for a Royal Charter—the qualification they will need to become members in their own right of the Council of Engineering Institutions. Paradoxically, the heating and ventilating engineers may have a stronger case for the administration of a qualifying examination independently of the universities than many of the other institutions, for there seem to be only two institutions—Strathclyde University and the Borough Polytechnic—at which suitable training courses are at present provided.

The Council of Engineering Institutions itself is also now in the thick of trying to decide what kind of institution membership should be made available to technicians as distinct from fully qualified engineers. A committee of the CEI has been at work for the past year on an examination of this problem—the most likely outcome will be a suggestion that technicians should fill specially designed grades of membership within the institutions. The Institution of Heating and Ventilating Engineers is already planning to strike out on its own in this direction. The more important question is whether the engineering institutions will be able to exercise a beneficial influence on the training of engineering technicians—the statutory creation of the Industrial Training Boards in the past two years

has not yet demonstrated that the training boards really know what training should consist of. It would be excellent if the engineering institutions could provide some help, although as they are at present organized there seems very little hope of that.

The Institution of Mechanical Engineers itself is doing reasonably well. Membership has risen by 1,600 to nearly 70,000. The accounts continue to show a surplus of rather more than £20,000, which is no mean achievement even for an organization whose assets are worth more than £500,000. Even so, the institution is looking to the joint secretarial services which the CEI is hoping to organize to provide some relief, in the year ahead, from the pressure of mounting inflation.

PUBLIC HEALTH

Cancer in Public

PEOPLE who fear they have cancer may develop a mental block which enables them to ignore warning signs and obvious symptoms. This unconscious refusal to accept unpleasant reality can lead to considerable delay in obtaining a reliable medical opinion and an associated—and frequently dangerous—delay in treatment. Dr John Hinton, professor of psychiatry at Middlesex Hospital, made these points at the first symposium of the British Cancer Council held at the Royal College of Surgeons on March 26.

The British Cancer Council is the official British representative at the International Union against Cancer. It was set up in 1968 by the British Association for Cancer Research to take the place of the National Committee on Cancer, disbanded in 1966. The British Association for Cancer Research is mainly concerned with experimental research. The new council was set up with the object of dealing with cancer and its associated problems on a much broader front. It seeks to disseminate information about all aspects of cancer research and treatment and to raise money to make a suitable subscription to the International Union.

Dr Graham Bennette, general secretary of the council, stressed the importance of providing new avenues of communication between specialists in diverse aspects of cancer research. Ways must be found of making research into different aspects of cancer intelligible and meaningful to workers in other disciplines. The plan is to hold an annual symposium and to circulate reports from a number of working parties—the first of them, already at work, is concerned appropriately with information exchange. No attempt will be made, as yet, to provide a cancer information service for the general public—the council lacks the funds for such a project and fears that its useful work would in any case be swamped by requests for help and advice. The council is also hoping to cultivate better relations with the press, chiefly by making available sources of authoritative opinion.

The majority of the council's member organizations are public charities. The council will make no public appeal for funds, therefore, but depends on private subscriptions. The sum required annually is about £20,000, of which £10,000 is the recommended subscription to the International Union against Cancer. Last year the council was able to pay £2,000, the largest amount yet paid officially by Britain.