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### **Summaries**

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# Concrete Reinforcing Steel as a Cause of Corrosion

K. Vögtli, Berne

The author explains why under certain conditions extensive concrete bar structures lead to corrosion of other underground metal constructions.

p. 520...529

# Terms and Methods to describe Frequency Stability

#### P. Kartaschoff, Berne

A recently developed statistical model describing the frequency stability of oscillators is discussed. This model is based on a simple representation of the spectral density of fractional frequency fluctuations. The relations between this spectral density and timedomain fluctuations of measurement results are also described. The introduction of the "Allan-Variance" allows to obtain unambiguous results and to avoid convergence difficulties which had often been ignored before. The principal measurement methods are briefly described, in particular a measurement setup developed a few years ago at the National Bureau of Standards (Boulder, Colorado, USA) for the investigation of phase noise and short term frequency stability of frequency generators.

## **News Items**

#### Telephone

Microfilm viewer positions at the Berne enquiry office have been increased by 8 to 32.

In the 3rd quarter of 1973, International Subscriber Dialling was made available in 12 local exchanges with a total of 13,000 connections. By the end of September, 8 of the 51 network groups were ISD-equipped throughout.

An automatic morning and alarm call system for 4480 orders has been installed at Lausanne. Equipment of this type has already been provided for Solothurn, Zurich, Basle, Geneva, Rapperswil and Biel/Bienne.

Of the 39.4 million international call minutes from Switzerland in May and June, 32.7 million or 82.9% were dialled direct by the subscribers. This is an increase of 6.5% over last year's ISD proportion.

The charge for a 3-minute call to Eire and Iceland has had to be increased to 12 and 22.50 Swiss francs respectively because of the rising cost of manual switching.

Between Berne and Buenos Aires, a third direct satellite circuit has been opened via Raisting.

## Telegraphs, Telex

Switzerland's first mobile telegraph office, which came into operation in May, is in great demand and has already been booked by the Regions for a number of 1974 events totalling 100 days.

Swiss PTT is operating 101 voicefrequency telegraph systems to 26 European and overseas countries. Of the 2299 channels available, 1951 (85%) are currently in use.

On 1st October, automatic telex service was opened between Switzerland and Madeira.

### Radio, Television

The number VHF radio transmitters in Switzerland has been increased by 2 to 188.

In the first half of 1973, 280,691 radios and 102,913 television sets were sold in Switzerland. This is an increase of 19,843 and 15,147 respectively over the same period of last year.

In September, 28 TV transmitters and transposers were installed at 19 different sites. The Swiss network now comprises 491 TV transmitters and transposers (1st chain 303, 2nd chain 110, 3rd chain 78) in 297 locations.

The new Zurich-Seebach TV studios for German-speaking Switzerland were officially opened on 22 September. For these buildings, which replace the 20-year-old provisional headquarters, the PTT has supplied technical equipment to the amount of 30 million francs.

The 15th simplex relay for Switzerland's mobile radiophone service has come into operation in the Berne region.

## Miscellaneous

Automation work on the Berne pneumatic tube system has been completed. The 22 terminals now connected include 8 banks and the Swiss News Agency.

The Berne PTT Museum is displaying stamps of the Principality of Liechtenstein at a special exhibition from 18 September to 30 November.