OTHER SCALES

All of the moving scales were marked by a dividing engine. The desired distances between divisions were calculated and tabulated in millimeters in advance.

The fixed scales of efficiency and power factor were divided by connecting two points of the desired ratio and marking accordingly. In general 10 or 5 was chosen for the denominator of the ratio.

A large amount of the basic nomographical methods used has been obtained from material which will be published in Professor H. L. Seward's "Construction of Permanent Diagrams for Engineering Formulae."

CORRESPONDENCE

DEVELOPMENT OF THE CIRCLE DIAGRAM

To the Editor:

The writer's article published in the May 1920 JOURNAL, page 458, entitled *Theory of Speed and Power Factor Control of Large Induction Motors by Neutralized Polyphase Alternating Current Commutator Machines* contained the following reference note:

For the development of the circle diagram, particular mention should be made of the works of Behrend, Blondel and Arnold-la Cour. Meyer-Delius has also written concerning what the writer has termed single-range regulation.

This note gave insufficient detail, resulting in the impression that originality was claimed for more of the ideas than were actually new. The writer therefore wishes to state that diagrams like Fig. 6, Fig. 9 and Fig. 11 were developed by Dr. H. Meyer-Delius and published in *Electrotechnische Zeitschrift*, May 1913, page 496, the article referred to in the above reference note.

The writer has later been informed by Dr. Meyer-Delius that the latter had also prepared, but not published, a diagram like Fig. 13.

The works of Alexander Heyland should also be mentioned for the development of the circle diagram. The writer regrets any injustice done by the brevity of the former reference note and hopes the above will correct any existing wrong impression.

JOHN I. HULL

General Electric Co.

EDDY CURRENT LOSSES—A CORRECTION

To the Editor:

In attempting to apply the formulas of my article entitled *Tooth Frequency Losses in Rotating Machines*, which appeared in the A. I. E. E. JOURNAL, September 1921, to actual machines, it was noted that formula 4, page 755, for the tooth pulsation eddy current loss gave values much too low. The original calculations

were then checked and a numerical error was found which altogether alters the conclusions in regard to the magnitude of the eddy current losses. The constant in this formula should be 1.3×10^{-7} instead of 1.96×10^{-9} . This makes the calculated eddy loss in the example, page 756, equal to 25.2 watts instead of 0.38. Therefore under the assumed conditions the eddy current loss due to the tooth pulsations is approximately equal to the total fundamental losses plus the tooth-pulsation hysteresis loss. In other words, for 17-mil sheet the tooth pulsation eddy current losses are as we have found by actual tests a large percentage of the total pulsation losses instead of being negligible as previously stated. The writer greatly regrets this error and trusts that you will call it to the attention of your readers in order that those who attempt to use this formula will not be led astray.

THOMAS SPOONER

Westinghouse Electric & Mfg. Co.

TELEGRAPH AND TELEPHONE NOTES

The wide extension of amateur and experimental radio installations throughout the country, together with the probable widespread use of radio telephone stations for Broadcast service, has prompted the compilers of the National Electric Code to incorporate in that publication revised rules to meet the changing conditions. The Standardization Committee of the Institute of Radio Engineers, New York, now has in hand the framing of a set of regulations to be recommended for inclusion in the next edition of the Code.

The telegraph and telephone section, American Railroad Association, has up with the Secretary of Commerce, Washington, the matter of securing modification of the regulation that telegraphers operating radio telegraph transmitting stations must use the Continental alphabet. In the near future several railroads expect to employ radio in the handling of message traffic, where the system can be used to advantage, and it is desired that telegraphers already in the service of the railroads and who use only the American Morse code be permitted to operate the stations without having to learn the Continental alphabet. The American Morse code is used on all land line systems in the United States and Canada. J. D. Jones, superintendent of telegraph, Pennsylvania Railroad, Philadelphia, is chairman of the A. R. A., committee.

Short-distance printing telegraph systems are now successfully applied in a number of industrial plants to meet modern requirements of internal communication. Systems now available are simple, economical and reliable.