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Editorial Notes

GEARS, GEARING & GEAR CUTTING.

Gearing is a subject of great importance to power transmission and Mechanical Engineering in modern times. It is a subject very commonly known, but very little understood.

It is in daily use in every factory on the machines, it is in use on the roads in every Motor Car & Vehicle, it is in use on the sea in every ship and in the air on every plane. Every motorist is familiar with its use. But few understand thoroughly its principles or realise what causes its defects and all remain in constant fear of a troublesome breakdown at any moment.

We publish in this issue a paper on this interesting subject, read before the Association of Engineers, on 1-3-60 by Mr. G. Dam, A.M.I.E., A.M.A.E., A.M.I.P.E., of Burn & Co.

In this issue only the first principles concerning the geometry of gears is dealt with. Subsequent issues will deal with the form of the teeth and the tools for cutting them.

Welding :

Welding is now being increasingly adopted for joining parts of structures which were formerly joined by riveting and were thought unsafe for welding. With developments in technique of welding and in composition and manufacture of electrodes, greater confidence is now felt in regard to adoption of welding,

and further confidence is created by the systems of careful inspection and testing of welded joints which have been recently introduced. This has resulted in the construction of a large rail cum road bridge in India designed to suit welding, and almost completely welded in every detail. This is known as the Ganga Bridge.

Details of Design Inspection and tests of welding for the bridge are given in this issue in an article which we are fortunate in getting from Sri B. N. Majumdar. D.I. Ministry of Work, Housing and Supply.

Technical Co-operation :

Since the last issue we have twice been invited by the French Trade Commissioner to meet French representatives and we have had the opportunity to learn how much they are co-operating with this country in Engineering development, and how much engineering progress has taken place in France. Not much of this is known in India because little has been advertised.

There has been great development in construction of rail roads and rail traction, Dams for Power and Irrigation, ships for sea transport, aircraft for aviation, and now Nuclear Reactors for Power production. France has helped India in manufacture of electronic goods.

Technical Co-operation with Germany, Japan, Britain, U.S.A. and U.S.S.R. has already been profusely dealt with in the daily papers and is too well known to need any mention here.

Bengali :

Since this country became Politically Independent—The number of Englishmen in the administration has reduced so considerably that little contact with properly spoken English language in day to day life in the country now remains, and in many places English is improperly understood. But Engineering and engineering materials in use are on the increase. It is therefore necessary that technical features be given more publicity in the language most commonly spoken and understood in the area from which we publish this journal. We have therefore included in this issue an article on the most common topic of the day, "Iron and Steel," in Bengali entitled, লৌহ, by Sri A. K. Deb and invite members to contribute more articles in this language for the benefit of those who have difficulty in understanding English.

Ourselves :

This Journal is now in its 36th year of Publication (the Association being 41 years of age). It has passed through difficult times of depression, war, members of the Association that it still remains in existence and is carried on.

It is hoped that its existence will be increasingly made use of by members to publish their researches, investigations, and experiences to enlighten the rising generation of engineers and help the engineering profession to improve more and more its service to mankind.