ASSOCIATION NEWS

PAPER MEETINGS

MARCH 30, 1970 :

Prof. M. Bhattacharyya of Mechanical Engineering Deptt., of Jadavpur University gave a talk at the C.M.P.O. Conference Room on the subject— "Design and its concept", which was highly educative and an eye-opener to the present-day leaders. A short summary of his paper in furnished below, which may be interesting to the readers.

The author dealt with the topic in two broad headings, namely, the design and its concept aspect from theoretical point of view and his suggestions as to the physical design procedure. Lastly, he emphasized the need of indigenous design keeping in view the need of the country in the pretext of our technological background.

Product is the beginning and end of a design, i.e., design must always be product-oriented. In the opinion of the author a design of itself has no practical value if it is not capable of turning out the produet economically. In reality, a machine which is less costly compared to another machine handling the same product in quantity and quality is a better design irrespeotive of the fact that the latter is possibly a sophisticated one. Once the product aspect is reviewed comes the next phase of design, namely, kinematic and kinetic aspects. In kinematic aspect motion transmission systems are designed whereas kinetic considerations deal with the determination of the shape and size of constituent components. In course of above following factors are to be considered :—

(i) selection of material,
(ii) availability of material– local or imported,
(iii) space availability,
(iv) dead weight consideration—e.g. aeroplane, rolling stocks, etc.
(v) processing feasibility
(vi) replacement and overhauling facility, and
(vii) first cost consideration and subsequent remaining economy.

A design of machine does not necessarily mean that all its constituents have to be designed a new from the very scratch. It is a wise proposition to copy an existing machine, if available, to start with. This, by no means, can be underestimated as first stage in design. The method adopted by Japan may be an eye-opener.

The author then emphasized the need of extensive effort in the field of import substitution—the term very loosely used by leaders, politicians and industrialists at their convenience. He has further pointed out that, to start with, import substitution may prove costlier even

than the imported ones, but in the long run the costs are bound to be competitive while our own labour would benefit by the advent of new employments.

Finally the author concluded with some examples of machines which have been designed by himself and have been manufactured and marketed. All of those machines, namely, Belt Buffing Machine with Pneumatic Dust Extractor, Temperature controlled Hot Press for leather to leather joining, Micro-pulverizer Hammer, etc. are import substitutions.

APRIL 7, 1970 :

In the second evening seminar arranged at C M.P.O. Conference Room, Sri P.K. Routh of Mechanical Engineering Deptt. of Jadavpur University talked on the subject—"Simple Device of Surface Development". This young would-be engineer (Sri Routh is a final year mechanical engineering student) has come up with a novel idea of using Spring Loaded Compass for the development of different surfaces. For the benefit of the readers, his paper is published in this issue.

APRIL 17, 1970 :

ANNUAL GET-TOGETHER

We celebrated the occasion on the evening of 17th April in the conference room of Bengal National Chamber of Commerce. It was attended by a large group of personnel from various fields. Sri Ashoke Sarkar, President, Bengal National Chamber of Commerce and Editor, Ananda Bazar Patrika graced the occasion as Guest-in-Chief. Sri S. Chatterjee, President of our Association and Chief Engineer, Calcutta Metropolitan Planning Organisation presided.

On this occasion, Sri A. C. Sarkar of Calcutta Metropolitan Planning Organisation spoke on "Selection of Electrical Machinery, Switch Gear and Control Gear in Designing Pumping Stations". He stressed on the different machinery and equipments associated with the pumping stations. The basis of classification of alternating current motor and selection of different classes of motors for application in large pumping plant was discussed. Application of over excited synchronous motor or synchronous condensers specifically for power factor correction, squirrel cage and wound rotor motors were also discussed. Preference of direct-on switching of high voltage pump motors and exclusive use of squirrel cage motors were emphasised, over all other methods of starting of heavy pump motors, even at the cost of higher initial investment in the form of two parallel incoming feeders.

It was intended that incoming breakers on the H. T. switch board should have normal protections in the form of inverse definite minimum time lag (IDMTL) over current, earth fault and under voltage whereas the breakers controlling high voltage pump motors should have special 'motor' protection relay' incorporating protection such as thermal overload, instantaneous over current, earth-fault as well as instantaneous unbalance and single phasing. It was pointed out that momentary line voltage fluctuation should not trip the circuit breaker and an arrangement with the help of suitable timer should be provided

to select the duration time of momentary flickering between 0 – 5 seconds.

The problem of raw water intake station, where variation of river water level throughout the year causing a variation of total head of the pump which may seriously affect the operation and performance of pump was discussed and the methods of overcoming or controlling the problem were detailed.

On the same evening, Prof. A T. Row, Chief of Ford the Foundation Advisory Planning Group attached to C. M. P. O. gave an elaborate and interesting talk on planning. We have a mind to publish a write-up of his talk in our journal as soon as it is received from him.

Our Chief Guest Sri Ashok Sarkar in his brief speech stressed the need and importance of planning for all old and unplanned cities particularly for the metropolis of Calcutta faced with a vast and complex array of problems. He commended the works done by C. M. P. O but regretted for the unnsual delay in solving its problems.

Towards the concluding lines of his speech, Sri Sarkar brought in the much talked topic—"Engineers in Administration" and expressed his sincerest desire to put professional men as the head of such projects. Unless this is done, administrative muddle will continue, delay and retrogation of progress is bound to take place in the fields of engineering, technology and industries. If these state of affairs continue, economic advancement will be far more difficult to achieve.

Sri Chatterjee in his presidential speech explained the significance of continuous and sustained planning to direct and to check the modern trend of urban expansion. He pointed out the vast shortages of basic civic utilities like water supply, sewerage and drainage, traffic and transportation, housing, health and education facilities and parks and recreational space in the Calcutta Metropolitan District. He also upheld the view that unless these deficits are met with immediately, the chronic problems are bound to reach an uncurable stage and even if curable it will certainly be prohibitive in cost.

Sri P. R. Guha, the Vice-President of our Association gave the vote of thanks and congratulated the members for attending the Annual Get-Together.

APRIL 24, 1970

On this evening seminar, Sri Pabitra Mukherjee, Works Manager of The Ananda Bazar Patrika spoke on "Recent Advancements in Printing Technology with special reference to Bengali Scripts." He nicely explained the process of printing and the complicacy involved in producing Newspaper—a very much wanted basic amenity of modern life.

MAY 29, 1970 :

A team of members of the Association of Engineers headed by our president Sri Chatterjee visited the Ananda Bazar Patrika Press. Sri P. Mukherjee, Works Manager, Ananda Bazar Patrika took us around the different units of the press. This visit made

all of us to know the process of printing and to feel the responsibility associated with the operation for production of newspapers. I am sure this visit has at least created an impression in our minds to be enough tolerant on the mornings on which newspaper is not received.

Hospitality in the form of tea and snacks was also extended to us by the management. Sri S. Neogi, our secretary gave the vote of thanks.

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