Lecture on Power Plant Efficiency

Interesting and Valuable Facts Given by Mr. Collins to Mechanics.

Yesterday afternoon Mr. R. T. Collins, who has been given the title of "Power Plant Efficiency" before the Mechanical Engineering Society, Mr. Collins graduated from this institution in 1914, taught there until 1922, became a member of the Board of Directors of the United States vining corps, and is now a consulting engineer, a "power plant doctor" of high standing.

He presented to the society many points which he has been called to improve the efficiency of existing plants. He emphasized each point with an account of his successful application to some problem that he has solved. He told them that an increased flow could be obtained from water pipes by eliminating elbows. The reason given was simple; the room, preferably above the cold water reservoir, and using their combined efforts to reduce a low pressure through or to heat the feed water made a great saving in the steam consumed. He mentioned the fact that the same saving could be arranged to blow off slightly below the limit fixed by the insurance agents. The roomy smoke of steam would be reduced to the fuel consumption. The inconvenience caused by this could be avoided by the use of cold water pipes. He also said that the cold water pipes could enter to the flow of gases and regulate the pressure. The author expressed the fact that the cold water pipes act as a preheater in the gas which is converted for carbon dioxide by the abnormally low percentage of this component. He is just as important as the damper on the supply valve, and that the gases the damper covered with heat is an inevitable.

Prom Committee.

Juniors Elect Five Men Prominent in Class Activities.

At the close of the balloting for Junior Prom Committee yesterday the following five men were elected:

G. W. Powers, E. E. Harbert, E. S. Knowlton, P. W. Smith, F. W. Ogilvie. The total number of votes cast indicated a lack of support in this year's election on the part of the Juniors in the election of this important committee.

Capps was the junior class football team for both years and has played basketball all three years. He also worked on the staff of the T. C. A. Men Given Profitable Discourse Yesterday. Yesterday afternoon the T. C. A. Men were given an interesting talk by Mr. Anderson. He spoke on "Consistency," the most important virtue in the business world, speaking in his profession depended upon understanding the bottom principles of Christianity. He explained that these very principles are the only laws which are consistent throughout, and until American laws approach these in uniformity a man's conviction is no proof of his moral guilt.

Hockey Team Outclasses Crimson

By Clean Shooting and Team Work

Sloan Gets 2 of 4 Goals For Tech While Duncan, The Harvard Star, Gets Only Score--Eichorn Shows Great Strength in Defence

_SUPPORTED by four hundred loyal rooters, the Hockey Team obtained the decision of the day's game by winning an exceptionally fast and clean game from Harvard at the Arena last night by a score of four to one. Sloan, Stecklen, Eichorn and Ramsey for Tech, and Duncan and Sortwell for Harvard, repeatedly brought the enthusiastic spectators to their feet by the brilliant flashes of individual play, but the wearers of the black and the men of the Crimson opposed every department of the game.

During the Harvard center, got the jump on Sloan at the first whistle and the puck went into the Tech territory, but it stayed there only for an instant. Sortwell, the Harvard forwards made it into the Tech goal, but the jump was found too late for their purpose and the Tech thousands were back on the attack. It was then that the puck fell to the floor in front of the Harvard goal. For two minutes the two teams were all over the ice and the Harvard defense was forced to pounce on Sloan and twice saved his team from defeat. With the puck in the corner, Eichorn fouled Duncan and was put out for a minute. Immediately on going back to the goal the Tech forward made a desperate try to score, but Eichorn saved his team from defeat in the third period. The game became faster and faster as time short ened in the fruitless efforts of the Crimson to retrieve their lost prestige, but the final whistle came too soon for their purpose and the Tech seven again combinations won the game.

The Harvard team now rallied and the Tech forwards made a dash for the Tech goal, but Ranney blocked the shots in short order. Sloan hit the Harvard goal. After two minutes Sloan had played the whole game and the Harvard forwards hit the Tech goal. Sloan was kept busy for some time, but he succeeded in checking the Harvard forwards. Duncan played a fine game for Harvard. He was all over the ice and played the whole game through. He was the most perfect form and it was up to him to retrieve their lost prestige. The Tech forwards had taken the jump on Sloan at the first whistle and the Harvard forwards hit the Tech goal. For two minutes the Harvard forwards were all over the ice and played the whole game. Ranney was kept busy for some time and again prevented the Harvard forwards from scoring. Again and again assailing Ranney, the Harvard forwards made him the hero of the game. He pluckily returned to the game and forced the Tech forward to the Tech goal. For two minutes the Tech forwards made a desperate try to score, but Eichorn saved his team from defeat. With the puck in the corner, Eichorn fouled Duncan and was put out for a minute. Immediately on going back to the goal the Tech forwards made a desperate try to score, but Eichorn saved his team from defeat.

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EXERCISES IN PUBLIC SPEAKING YESTERDAY

Subjects Were Ably Dealt With and Were of Considerable Interest.

The exercises in Public Speaking Thursday, at 6 o'clock, showed encouraging improvement in the work of the speakers. They are now on the third and final round of speeches, and begin to show the effects of practice. The delivery is, on the whole, rough, as would be expected, considering the short time which can be given to preparation. At the same time it is generally effective, and most of the speakers on Thursday held the attention of the audience in a gratifying way.

The subjects were of considerable interest. Mr. Munch spoke on labor unions from the manufacturer’s side, and on the condition of this problem in Los Angeles. Mr. Hurst gave a sketch and practical talk on the development of win-power, the power “to love yourself in the right thing at the right time.” Mr. Robinson, in dealing with the topic of direct and indirect taxation, was under the necessity of condensing a large subject into a brief talk, but he introduced considerable humorous illustration, and seemed to have his hearers in his grasp.

The speech by Mr. Kennard on Alpine climbing was most interesting where he gave the story of his own ascent of the Breithorn, and spoke in detail of the expense of a summer of climbing. Mr. Pratt’s talk was a selection of data from the very best authorities on Alaska, the most difficult speech of the afternoon to give, and one of the most interesting.

The second set of speakers will be heard on Thursday, January 4, at 4 P.M.

POWER PLANTS.

(Continued from Page 1)

Collins found that the introduction of mechanical stokers in a plant using 700 tons of coal a day made a saving of $1600 a month, although the stokers were originally installed to avoid labor troubles. In some cases a poorer grade of coal when burned under the right conditions effected quite a saving. In one power plant it was found that 14 per cent. of the boiler refuse was combustible matter, and by reclaiming some of the coke by hand a saving of $7500 a year was possible. The handling of coal can be cheapened from 17 cents per ton to 3 cents per ton by using machinery instead of wheelbarrows. The use of fuel oil, now practical in Texas and California, solves this problem of handling, and makes the elimination of smoke possible.

Attention to the temperature of the feed water and to the protection of steam pipes effects a great saving in coal. The condensers ought to be examined for leaks which may spoil the vacuum. The gauges registering this vacuum, as well as those measuring the steam pressure, need frequent calibration.

A program of dates when the various parts of the engines are to be inspected saves much by preventing accidents. He told how large steam engines should have a very well arranged system of oilling, for large savings can be made. The dynamo’s output cannot be regulated by varying the speed of the engine, but its efficiency can be improved by using filtered air through them.

In some cases the most sensible record of the plant is the most certain indication of faults and losses in efficiency. This record also allows the engineer to send out intelligent specifications for new apparatus. Samples of a certain metal covering over a dozen types of machines were distributed among the members, and a discussion of the contents and purposes of these concluded the meeting.

These are busy days at the Gym.

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Prof. Sabine Gives Valuable Information — Conditions in Notable Buildings.

The last lecture on Architectural Acoustics which was given by Prof. Sabine of Harvard proved to be far the most instructive and interesting that has yet been heard in this course. Prof. Sabine had led up to his final consideration of the subject through various explanations of his own experiments as well as by many slides before the audience in the lecture room, and had prepared his listeners admirably for the practical illustrations and definite rules which can be followed to make sure of attaining a desired end in the acoustic properties of any room.

The subjects of the lecture, “Calculation in Advance of Construction,” “Correction” and “Notable Buildings,” were fully taken up and explained in such a way that the best technical person could easily follow the lecturer’s meaning, and yet every point was still of utmost interest to the architect and engineer. In fact, to the architect this last lecture is most invaluable, for by the application of the principles and the rules laid down by Prof. Sabine, all of which he determined by many years of hard work and experimental research, the builder or designer of a building may be sure of attaining the acoustical properties of his auditorium to approach perfection in a very great degree.

Of great importance likewise was the consideration of the means for correcting the acoustic properties of a room in such a way that excellent results can be obtained where it has heretofore been thought impossible. To illustrate, Prof. Sabine spoke of several buildings which have been constructed to give perfect acoustic conditions, and also of many which have been corrected so that they are very fair for auditorium uses.

SENIOR PORTFOLIO.
Committee Choose Hearn as the Official Class Photographer.

At a midnight meeting of the Portfolio Committee, which was held for the purpose of deciding who should be the official class photographer for 1912, it was voted to give the contract to C. W. Hearn. All the members of the class are asked to see Mr. Hearn and arrange for sitting during the holidays. All the men who get in at this time will not only get better pictures, due to the fact that the photographer will have less rush work, but they will also have the satisfaction of knowing that they have helped him greatly.

Everything is in readiness at the studio, 171A Hoytman street, for the work, even to the extent of a large number of lenses which have been secured to cover the loss by breakage, and Mr. Hearn will be glad to see members of 1912 at any time.

COMUNICATION.

(We invite recommendations from all men in the Institute on important subjects. We take no responsibility for their sentiments and do not agree to print any that may come in, whether they be signed or not.)

To the Editor of THE TECH:
Will you kindly extend, through THE TECH, my thanks to the members of the Track Team for their very kind Christmas remembrance of gold cuff links and pin.

Sincerely yours,
FRANK M. KANALY.

Fletcher is showing Varsity class in hockey practice.

Huntington, the Harvard hockey captain, is laid up with a bad ankle.
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