

INSTITUTE OF MARINE ENGINEERS
INCORPORATED.

SESSION



1903-1904.

President—SIR JOHN GUNN.

Local President (B. C. Centre)—LORD TREDEGAR.

PRESIDENT'S ADDRESS

AND PAPER BY

MR. K. C. BALES. (MEMBER)

ON

GRINDING MACHINERY AND
ABRASIVE WHEELS.

CHAIRMAN :

THE PRESIDENT.

SIR JOHN GUNN said he was glad to have the opportunity of meeting the members. His first duty, he thought, was to express to them his regret that he had not been able to meet them oftener since they had done him the honour of electing him president. He could assure them that it was not from want of will, but distance, and the many claims and pressure of other engagements precluded the possibility of his being able to meet them in London. His second duty was to thank them very cordially

for their support and attendance at the annual banquet. It was very gratifying to find such a large assembly of engineers and those associated with marine engineering work. He had no desire or intention of reading to them a special or a technical paper, either on the nature of their duties or the special qualifications required by a marine engineer. When he consented to address them he had asked his friend Mr. Adamson if he would be good enough to give him a date, so that he would be able to take a short holiday in order to prepare something worth listening to. Unfortunately the date had been irrevocably fixed, and he was there that night practically impromptu. As one interested in ships and shipowning he had during his experience realised and seen many changes in marine engineers in their calling, and particularly in the ability which was now shown by many men who were still sea-going. They all knew that the engineer of the past was no longer the engineer of the future. The foundations had been well and truly laid, but scientific research, and the various methods adapted to apply the results of the past to the requirements of the present and the prospects of the future, demanded from marine engineers the highest intelligence and the most careful and practical operations in their various duties. He thought it would be outside his province for him to attempt to tell them what the relative nature of those duties was or ought to be. The training, the preparation, and the necessary qualification for those duties, as well as for any other technical or specific work, were subjects well worth their consideration. They had seen and heard—many of them from the most distinguished engineers and scientists—various recommendations as to the best method of training their young men to become engineers on board merchant vessels. Those were problems that he had seen, and they had seen, put forward. He was perhaps a bit old-fashioned in that matter, but he had always believed that the youth should have a

thorough theoretical training to begin with, so that his mind should be imbued with the principles and the special qualifications that were to govern his profession in the future. When he had been brought to a certain standard he should then apply himself to the profession before him. If he had then served such a reasonable amount of time and given such attention to machine work as they ordinarily looked for—that, added to the knowledge to be acquired in the drawing office, and the various other operations that applied to it, would reasonably fit and qualify him, and be the best equipment he could reasonably have before he went to sea. He did not wish in any way to dogmatise—he made those few remarks from his own personal observation. The ablest and best men who had given thought and special care to the subject were, he thought, all agreed that to be a thorough practical marine engineer a man must go to sea. He thought they were generally agreed that however well-grounded they might be in theory it was necessary to go to sea to know how the machine worked, how they could best control it, and how, in case of accident or danger, they could best remedy defects. He was sure they were all aware that in the judgment of most of them the engineer on board ship had not even yet attained to the position to which he was reasonably entitled. It was perfectly true that in the Navy something had been done, but that something was not very great. He hoped and believed that the day was not far distant when the engineer would hold his position on his own responsibility. In his judgment the engineer was of equal importance with the commander; in fact, in many instances he was infinitely more important to the ship than the commander himself. He had seen it stated that there was to be some kind of combination between what might be called the commander and the engineer, that one must have knowledge of the duties appertaining to the other, so that both might run on parallel lines. He was not going to dilate upon that great question. He rejoiced to know that

a very distinguished man, Lord Selborne, was now at the head of their Navy. He had the privilege of knowing him personally and that knowledge led him to the belief that whatever could be shown to him that would be of benefit to the Navy, no antiquated red tape would prevent him doing his duty, and putting the right man into the right place. With regard to the important position and the important changes that had taken place during his recollection, he could look back for a good long period, something like half a century, and he had seen many changes during that time. He could remember the old engines of the single type, which were followed by the compound engine. Afterwards came triples, quadruples, and now they had the turbines. He personally rejoiced in those departures. If, as a people, they were to maintain their prestige they must be up-to-date and take advantage of all the knowledge that their trained engineers and men of science could bring to that subject. He hoped to live to see the day when those gentlemen who were connected with their merchant service would be working harmoniously with the other branches of the service, because when the time of strain and need came, they knew, and he knew, that the men who would come to the front independent of all the training and everything else necessary for the Navy, were the men who could control and direct their merchant ships. Upon that in no small measure must depend the security and the welfare of that great Empire of theirs. He feared he was trespassing upon their time, for as he had told Mr. Adamson at the beginning, he had not promised an address. He had said that he would simply say a few words in an informal way. He remembered in his younger days a young man in his native town who started what he called an air-ship, and he believed some people did see him go a few hundred yards through the air unaided. The other day he saw an air-ship coming from the Crystal Palace to St. Paul's. At all events, it tried to go round St. Paul's, and did go part of the

way, and then the elements became too strong for it, and it had to reverse and go back. That air-ship was the result of perseverance and pluck. They must all be able to receive, and be able to try to develop scientifically and accurately, every phase that tended to progress in their marine engineering work. They would be glad to know that they were going to have a paper read by one of their members who had been good enough to prepare one for that evening's discussion. He was quite sure that it would please them more, and be much more for their edification, than to listen to him.

The President then presented to Mr. C. W. Barnes (Associate Member) the "Denny" gold medal that had been awarded to him for his paper on "Ship Electric Lighting." In making the presentation he said that the medal was a very handsome one. He was glad to say that the branch of the Institute with which he was connected at Cardiff held some of those medals. It was a token of ability of a special kind, and he had very great pleasure in presenting it to Mr. Barnes. He need scarcely remind Mr. Barnes that the original man who presented that medal was a distinguished engineer who had worked himself up from the lowest rungs to the highest pinnacle in the engineering profession. He was certainly one of the most successful engineers and shipbuilders in the United Kingdom, and he congratulated Mr. Barnes upon having won such a medal. He trusted he would long live to wear it and to keep it as a memento. He also hoped that he would live to earn yet other medals.

Mr. C. W. BARNES, in reply, said: Mr. President and gentlemen—I have to thank you very sincerely for the honour you have done me in awarding me the "Denny" gold medal. It was a great privilege for so young a member as myself to read a paper before so many who had more practical experience than I could lay claim to, and I

am only too glad to have been of any service to the Institute. I should like to add that any junior member meditating reading a paper will find, as I have found with much gratitude, that his task will be considerably lightened by the kind help he will receive from the officers of the Institute, both honorary and paid. It may be of interest to know that the basis of my paper consisted of rough notes taken while I was serving my time in the engineering and shipbuilding works of a member of this Institute.

Mr. KEITH C. BALES (Member) then read his paper on "Grinding Machinery and Abrasive Wheels."

