

Session on
PEACETIME UTILIZATION OF WAR EXPERIENCE

Session Chairman: BORIS A. BAKHMETEFF

Columbia University, New York City

INTRODUCTORY REMARKS

As Chairman of the Opening Session the writer wishes to express the sentiments which he is certain animate all those present. It is a pleasure to return to Iowa and very gratifying that the Hydraulics Conferences, suspended during the war, have resumed their course. This Conference, third in sequence, promises to be particularly successful. The attendance is impressive in number and in distinction, and that notwithstanding all the difficulties of the post-war period. The program is varied and most promising. All this serves as an unmistakable proof that the Hydraulics Conferences as organized at Iowa University are a living necessity. It is earnestly hoped that these reunions will follow in unbroken succession, growing in usefulness and importance to the hydraulics profession.

It is only natural that this gathering is alive with memories and recollection of the supreme effort to which so many of those attending actively contributed. In this war, science and research have played an especially important role. The Institute deserves all praise for having advisedly chosen as the underlying theme for this Conference what was termed in the program as "the application of wartime experience to peacetime phases of hydraulic engineering." At this session papers concerning wartime accomplishments will be presented by outstanding representatives of the Army and Navy. First, however, the writer would like to dwell briefly on one or two points potently emphasized by recent experience.

One is the unity and indivisibility of science. How useless and irrelevant are all the supposed partitions between different phases of engineering science in the light of what has been learned and

seen to happen. Where, on the other hand, is one to draw the line between science and the applied arts? The most abstract and theoretical findings have served as a basis for the most important practices and implementations. Technology has been compelled to tread on ground which only recently was thought to be the exclusive field of the theoretician.

The other point is the paramount importance for engineering of fundamental research. It is false economy to restrict observational investigation to narrow "practical objectives". The most far-reaching practical results have grown out of research devoted to the broadest and deepest purposes. The papers this morning will testify most convincingly on the points brought forward.

The author of the first paper, Mr. Gail Hathaway, needs no introduction to a hydraulic audience. His achievements in the lines of applied hydrology are known the world over. Most of his professional life has been spent with the U. S. Engineers, where at a comparatively early age Mr. Hathaway attained the highest rank open to a Civilian, that of Special Assistant to the Chief of Engineers, U. S. Army. In the last phase of the war he was called upon to render a rather unprecedented service to the strategical plans in Western Europe in correlating the movements of the Allied Armies with the possible flow of the Rhine and its tributaries. Here again a new page was opened in this war. Logistics in the past dealt with munitions, transportation, food, and all sorts of supplies. The recent dependence on hydrology and hydraulic engineers was something unheard of. The quality and effectiveness of the work performed, which has found widespread publicity, was rewarded in unprecedented form by the award to Mr. Hathaway of a Presidential Citation accompanied by the Bronze Star Medal. The writer wishes to say to Mr. Hathaway that the profession is proud of him as one of its most distinguished members. Engineers are at one in saying "Well done, Gail Hathaway".

The author of the second paper on the program is Captain Harold E. Saunders, U. S. Navy, Technical Director of the David Taylor Model Basin. All those who have been privileged to visit the Carderock establishment and have had a chance to see all the varied and fascinating work so efficiently carried out by a most capable and well organized staff, carry away a sense of admiration for the man who is responsible for planning and building up the institution

and who inspires and directs its activities. It seems somehow only natural that the task of setting up what is probably the largest and best equipped Model Basin in the world was given to Captain Saunders, for from the early days when in 1912 he graduated first in his class at Annapolis, one always finds the name of Saunders associated with the most difficult and important problems undertaken by the Navy. A particular impression which one carries away from a visit to the David Taylor Basin at Carderoock is that of a most fortunate and effective link between fundamental knowledge and applied pursuit. Few men can give a better and more vivid account of the new spirit which animates recent war-time research than Captain Saunders.