土木學會誌

第 49 巻 第 5 号

昭 和 39 年 5 月

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東 京 都 新 宿 区 四 谷 一 丁 目
TEL (351) 5138 (代表)
年間会費　正会員　1 800 円　学生会員　900 円

JOURNAL OF THE JAPAN SOCIETY OF CIVIL ENGINEERS
Vol. 49, No. 5, May 1964
1-CHOME, YOTSUYA SHINJUKU- KU, TOKYO, JAPAN

SYNOPSES

THE OBSERVATION OF TOHOKU DISTRICT DEVELOPMENT

BY TOHOKU BRNCH OF J.S.C.E (Page 9～47)

The Tohoku district is situated in the northern part of Honshu, extending over 535 km from north to south and 200 km from east to west, occupying an area of 66 887 km² and it consists of six prefectures, Aomori, Iwate, Miyagi, Akita, Yamagata and Fukushima, and holds a population of about 250 thousands which is about 1/10 of the entire population in Japan (as of October, 1963). However, this district is scarece of the natural resources, and of mountainous topograph and severely cold in winter. These natural conditions have hithertos hampered the development of this district. But in July 1963 Hachinohe industrial territory in Aomori prefecture and Sendai terriory were designated as the new industry cities. The overall development are promoted with the industry zone of Kamaishi and the oil field of Akita as the center. In this district which holds a quite few sightseeing zones, Tagokura and Okutadami dams have been built and the highway, too is under construction.

The reclamation work of Hachirogata and the civil engineering work for the city planning are also in progress. In the present paper the development of this district has been analyzed from respective standpoints.

STANDARD OF DESIGN OF CONSTRUCTION MATERIAL

1. IN CASE STEEL *BY T. TAKADA (Page 48)*

   The present paper describes the standard of design of steel structure, concentrating on the permissible stress and the factor of safety.

2. IN CASE OF CONCRETE *BY M. KONO (Page 51)*

   The present paper chiefly describes the design of various structures such as slab, beam, pillar, flat, slab and rahmen and so on as a comparison of standards of design of civil engineering and architecture.

CONSTRUCTION WORK OF THE SECOND ROCK IN AMAGASAKI HARBOUR

BY Y. TADA (Page 59)

The second Rock in Amagasaki harbour was planned from the viewpoint of the increase of volume of freight handled in Amagasaki harbour which is situated in the Hanshin industry zoon and its construction was started in August last year and now being sked up aiming at the completion in March next year.

The present paper describes the necessity of planning of the second Rock construction work, the policy of design and various problematical points as to the execution of work.

A CONSIDERATION OF PERMISSIBLE CONCENTRATION OF SMOKE IN HIGHWAY TUNNEL

BY T. TAJIMA (Page 67)

The purpose of conventional ventilation of highway tunnel consisted in diluting the poisonous carbon monoxide gas emitted from the running automobiles. However, recently the purpose has been shifted to the dilution of smoke for securing an adequate visibility and safety because of the speed up of diesel automobile and light-van.

In the present paper various problems in the direction such as to what extent the smoke concentration shall be reduced, how the illumination and running condition of cars in tunnel affect the determination of permissible smoke concentration are discused and on the basis of these data an ideal concentration are dealt with.

LOOSENING OF NATURAL SOIL AND THE MAGNITUDE OF GROUND PRESSURE

—Case of Excavation of Railway tunnel—

BY T. ADACHI (Page 72)

At the time of excavation of the tunnels—both the first Atami and—on the new Tokaido line, the settlement of—points under the ground as well as on the ground surface was measured and as a result it was found that the loosening of natural soil due to the tunnel excavation was far greater than that hitherts considered. Then in order to find the load (ground pressure) actually happens at the time of tunnel excavation. The actual condition of collapse at the time of excavating a tunnel (about 40 km) in the jurisdiction of Shizuoka New Tokaido line construction work division was studied. The present paper describes these measurements and investigation.