

complicated task. Moreover, air transport operations into the Imphal Valley could have been intensified but for the low standard of proficiency among the inexperienced controllers on the few airfields available. Within these limitations, however, much has been done, and its value is evidenced by the fact that at the only two airfields in 221 Group which could be provided with proper flying control, there were in February no avoidable accidents among the four squadrons accommodated there.

173. In November there were only thirty trained British Flying Control Officers in the Command. This small body was reinforced by forty resting aircrew and thirty I.A.F. officers. There were forty main airfields along the reinforcement routes and in Ceylon, with no airfield controllers, no trained airmen and very little equipment, among which these personnel were distributed.

174. In anticipation of the arrival of trained controllers from England, plans were made to institute a full Flying Control organisation in the operational areas and along the reinforcement routes by February. Unfortunately the flow from U.K. was stopped in January and the plan could not be implemented. The urgent needs of operational airfields had to be met by stripping other areas below the safety margin and diluting their establishment with too high a proportion of I.A.F. officers. At the end of May deficiencies on current establishments amounted to 150 officers and 100 airfield controllers.

175. One of the most encouraging features of the development is the progress made towards complete integration with the U.S.A.A.F. Liaison has been pursued since September 1943, and in March of this year a joint conference proposed the setting up of one system of Air Traffic Control throughout the Command. A committee was set up to examine the technical problems involved and make recommendations. These included a Joint Flying Control Board which will meet at intervals and, it is hoped, maintain the unanimity achieved by the initial committee. Application was made to U.S.A.A.F. H.Q. to send to the Command officers trained in the joint system now working in U.K.

176. I therefore anticipate that a unified system of Flying Control will soon be operating throughout the Command, and that every crew will receive standard briefing and standard aids on all flights.

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V.—ARMAMENT

177. The slow receipt and dissemination of up-to-date information on armament matters, as indeed in all technical branches, has hindered the work of making the best use of weapons and developing the striking power of the Command. New publications take two months to arrive and an even longer period to reprint and distribute. One remedy has been an extensive use of the microgram service to hasten the process of keeping technical personnel informed on all current developments.

178. Operational failures have been reduced in spite of the fact that fighter squadrons do not possess Armament Officers. It has been found that the stoppage rates on squadrons

more than twenty miles from their Wing Armament Officer are from 1.5 to 2.5 times those on squadrons less than twenty miles from the wing. In spite of the fact that there are established posts for only ten squadron Armament Officers in the Command, which are naturally allotted to the bomber squadrons, and that there are many establishment vacancies which have not been filled because of the serious shortage of armament officers, 303 gun failures have fallen from 0.11 to 0.08 and 20 mm. from 2.07 to 1.48 per thousand rounds. Bomb failures have similarly fallen from 0.47 to 0.25 per hundred bombs. The measures which contributed to this improvement were a decentralisation of the training and maintenance branches, a better system of check on failures, and careful distribution of available manpower. To aid in this distribution a certain dilution of I.A.F. personnel has been accepted. These have proved suitable and efficient tradesmen at certain tasks and have enabled the following dilution to be effected:

	per cent.
(i) I.A.F. Squadrons	... 100
(ii) M.U.s	... 50
(iii) Other non-operational units	... 25
(iv) Operational R.A.F. Squadrons	... 25
(provided British Other Ranks are substituted when available.)	

179. A number of new weapons have arrived in the Command and come into use, operationally, during the period. Hurricane IID aircraft armed with 40 mm. cannon first operated in No. 20 Squadron in December, 1943. The initial A.P. ammunition was supplemented in February by H.E. which has proved very effective against rivercraft. R.P. has been used by No. 211 Squadron since January. It was at first employed against bridge targets, but the delay fuse was found to be unsatisfactory for this type of attack and no proper facilities were available for modifying it. In view of this, R.P. attacks have been directed against rolling stock, transport convoys, oil installations, factories and rivercraft with good effect. 500 lb. M.C. bombs came into use early in the new year, and in addition to the supply to Bengal, stocks have been built up at selected stations in Southern India and Ceylon should action become necessary against a Japanese Naval Task Force. 2,000 lb. A.P. bombs have been distributed for the same purpose.

180. A 4,000 lb. bomb was dropped on Burma for the first time in November, 1943, against railway targets at Sagaing; its employment since then has been extended both by day and night. Among American weapons which have been introduced since November are parachute fragmentation bombs, 300 lb. spike bombs for use against railway lines, the noses being of indigenous manufacture, and the rocket-gun employed in the same manner as the R.A.F. rocket-projectile.

181. Close liaison between British and American Armament Staffs resulted in much inter-change of information and resources. American aircraft used R.A.F. flares and the R.A.F. used American mines, incendiaries and drift lights.

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