confined to mines and mills. Employment at smelters and refineries was maintained at a relatively stable level throughout the period: The 1952 average of 17,889 compares favorably with an average of 17,111 for the first 10 months of 1957.22

IMPORTS AND CONSUMPTION

Since the end of World War II, the position of the United States has changed from one of relatively minor importance in the international movement of lead and zinc to one of major importance. This country's consumption of both lead and zinc has greatly expanded and become much larger than domestic production. There has been a general upward trend of foreign primary lead and zinc production, accompanied by a substantially decreased U.S. primary lead production and an only moderately decreased production of primary zinc.²³ In consequence, imports of unmanufactured lead and zinc have been very much larger than imports at any earlier period. Outside the United States the demand for primary lead has decreased substantially and the demand for zinc has increased only slightly. Thus a large part of the exportable surplus of foreign producing countries has moved to the United States.

The high level of domestic consumption of the two metals compared with prewar years is attributable only in part to defense needs. Over the past decade and a half, the growth in population has augmented the demand for lead and zinc in a wide variety of producers' and consumers' goods. The consumption of lead, particularly in storage batteries and as a gasoline additive, has expanded greatly, as has the

consumption of zinc in galvanizing and diecasting.

The extent to which future domestic requirements for lead and zinc can be met from domestic sources will depend on the production of newly mined ores as well as on the recovery of these metals from secondary sources. But as consumption is expected to increase, while domestic mine production remains relatively constant, future domestic supply will be derived increasingly from imports and secondary sources. According to Bureau of Mines projections, based on patterns of current use, including increased demand for automobile batteries, building construction and tetraethyl lead with normal population growth, and assuming a high level of industrial growth, total lead demand in the United States is expected to be approximately 1.45 million tons by 1970. (In 1955, total demand was about 1.2 million tons.) But during the 4 years ended in 1953 mine production of lead was only 28 percent of domestic supply, while imports and secondary lead each furnished 36 percent. During 1952–53, if stock accumulation and exports had been eliminated, actual consumption would have required about 257,000 tons of imported lead annually, rather than the 368,000 tons actually imported. Thus the United States does not depend on foreign sources of supply to the degree the imports suggest.25

²² U.S. Tariff Commission, "Lead and Zinc" (1958), statistical appendix, table 35.

²³ U.S. Tariff Commision, "Lead and Zinc" (1958), statistical appendix, tables 5 and 6.

²⁴ See Bishop and Mentch, "Lead," loc. cit., p. 443.

²⁵ Total imports from Canada and Mexico alone during 1950–53 averaged almost 250,000