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FORGING TITANIUM

Cleveland, O.—Forging of titanium has become a reality with the announcement that the Steel Improvement & Forging Company here has on its books orders amounting to more than $1 million for forged titanium parts.

While no announcement is made of the identity of the customers or the end use of the titanium forgings, it can be said that the deliveries now being made are the result of several years of laboratory study and experiment by Steel Improvement.

Culmination of that laboratory work in delivery on a production schedule marks a step in the development of what may become a most important member of the light-metals family. It is a step which will prove of great interest to those who remember the earliest history of those two other members of the light metals family, aluminum and magnesium.

Titanium as a mineral element has long been known and there has been some commercial use of it, particularly in the form of oxides in paints. Use of the refined metal has lagged, however, because while the ore from which the metal is refined is found plentifully in all parts of the country and elsewhere in the world, the refining processes, as was the case at first in both aluminum and magnesium, have been intricate and expensive. The supply of the metal is consequently limited as yet, and the price high.

Metallurgists believe, however, that refining processes will be so improved as to make the use of the metal important to industry. Even now it has some qualities which make its use at today's prices worth while.

Most significant is the fact that a titanium forging is the equal in strength of stainless steel but weighs little more than aluminum. In building aircraft, either for defense or for the transportation of passengers and freight, weight is a vital factor.

In aircraft construction, many aluminum forgings are used for strength and lightness. The modern jet propulsion plane, however, requires metal in its engines which will withstand such heat that aluminum cannot be used. Every jet engine requires from two to three thousand parts where both extreme strength and high heat resistant qualities are required. Stainless steel is largely used there. The weight saving offered by titanium forgings will be tremendously important.