

CONVAIR

COPY

August 23, 1951

Mr. William L. Smith
Aircraft Industries Association
Shoreham Building
Washington 5, D. C.

My dear Mr. Smith:

Pardon the delay in forwarding the inclosed brochure on the necessity for a forging plant to be set up somewhere in the southwestern district, preferably in Fort Worth. As explained to you on B. G.'s and my trip to Washington, this is a very preliminary study, but there are facts and figures contained herein that give some idea of the amount of parts that it is now necessary for us to whittle out of solid metal, not only costing us greatly in machine capacity and manhour cost, but in a waste of critical material amounting in many instances to 1000% of the weight of the finished part.

This brochure was compiled in an effort to justify and secure permission for acquisition of a 14,000 ton press now located at the South Charleston Naval Ordnance Plant, which is being used as a depot for storing machine tool reserve for the Naval Bureau of Ordnance. The press, which is not being used at present, is part of the installed equipment utilized during World War II for the forming and contouring of armor plate. The weight of the press is approximately 5,000,000 pounds. The original cost was \$863,000.00. The cost to dismantle and re-install would be approximately \$100,000.00. The cost to reproduce at present day prices is estimated at \$1,500,000.00. This machine, according to the best information which I am able to obtain, was built by Universal Machinery Corporation, and is known as a General press. There are also located in the South Charleston Plant other presses ranging from 6,500 tons up to the 14,000 ton press above described. We have been informed that there were three of these 14,000 ton presses built for the Navy Department, and to the best of our knowledge, these are the largest presses ever built in this country. The 18,000 ton press referred to below which is located at Wyman-Gordon was built in Germany and is the second largest press ever constructed. The Germans also built a 30,000 ton press which was awarded to Russia under the Reparations Agreement. There are two or three 15,000 ton presses which we obtained under the Reparations Agreement, one of these is being installed in the Alcoa Plant in Cleveland; one is being installed in the Air Force Pilot Plant at Adrian, Michigan; and it is my understanding that the third one is being installed at the Wyman-Gordon Plant at Grafton, Massachusetts.

We should have in this area a forging plant comparable to Wyman-Gordon's Grafton operation. In order that you may be informed on the Wyman-Gordon setup, the necessity for this plant was realized during the last war, and it is my understanding that John Steelman, at that time head of the Munitions Board, monitored the program to get it into operation. The plant was built under Planor 2304 and

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is operated by the Wyman-Gordon Company on a fixed fee basis.

The land was acquired at a cost of	\$ 108,000.00
The original building cost was	1,016,000.00
Furnaces, equipment, etc. cost	1,793,074.00
New equipment placed in the plant prior to 1949	1,384,000.00
There is installed in the plant an 18,000 ton press received under reparations from Germany on which the new cost was estimated in 1949 at	1,351,000.00
There is also a 7,000 ton press, which was re- ceived under reparations, on which the appraised value as of 1949 was	<u>800,000.00</u>
TOTAL	\$ 6,344,074.00

In view of the increase in cost of machine tools,
as well as in building costs, it is estimated
that to duplicate the Wyman-Gordon setup today
would cost at least \$12,000,000.00

Under the present B-47 program, Wyman-Gordon's total capacity would be absorbed, leaving only the Alcoa Plant in Cleveland to produce soft metal forgings for the balance of the air frame industry. Our own requirements plus Boeing's would more than consume the capacity of a setup similar to, but on a larger scale, than the Wyman-Gordon Plant. At the present time, castings and forgings constitute our most critical purchasing problem. Not only is the capacity to produce our requirements not available in this area, but we are experiencing extremely long lead times on such orders as we are able to place. This situation, resulting in the necessity for whittling parts out of solid metal in our own machine shop, raises the cost of airplanes to the Government through excessive manhours of machining and handling, as well as material waste. It also makes necessary the postponement for long periods of time of changes in aircraft design deemed desirable by the Air Force. Of a total of 1,271 mill jobs currently accomplished in the manufacture of the B-36, 48% are being hogged out of bar stock but could be designed as forgings were forging facilities available. Manufacture of these parts as forgings rather than by production from bar stock would result in a net annual saving of \$790,881.00. Further details on the comparison of costs between machine parts and forgings are set forth in Exhibit 2.3 in the inclosed brochure. A recent analysis of four typical parts presently being machined, but which lend themselves to production as castings or forgings, indicates that an average saving of \$100.00 per airplane could be realized were we able to go to the more efficient manufacturing method. An average saving of 35.5 manhours per airplane would accrue. These four items are merely isolated examples selected at random to illustrate a situation, which, as we have indicated, is duplicated many times in the manufacture of B-36 airplanes.

As I have mentioned, we believe that our own requirements and Boeing's would more than absorb the capacity of a plant similar to Wyman-Gordon's. In addition, it should be recognized that Fort Worth is the center of a rapidly growing aircraft industry. Chance-Vought, the two Bell Plants, Temco, Luscombe, and others in the immediate vicinity are also to be considered in this picture, pointing to the need

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for a setup somewhat larger than the Wyman-Gordon operation.

It might be of further interest to you to know that there are a large number of both hydraulic and steel hammers which were available two years ago, and which I doubt very much have been put to use up to the present time, in the Champion Forge Plant in Cleveland. This was a government owned plant. A total of 35 hammers, ranging in capacity from 1,000 pounds to 35,000 pounds, and including six board hammers of 6,000 pounds capacity, were observed standing idle and not being maintained, with the foundations rotting out from under them. This plant may be one of those scheduled for rehabilitation; however, again the location is not strategic. It is our opinion that the locating of a complete forge plant including steel and soft metals; namely, aluminum, alloys, magnesium and other non-ferrous metals, in the Fort Worth area will pay great dividends in the course of the next few years.

Convair is not interested in establishing its own forge plant, but will be glad to cooperate in any way necessary to aid in securing a plant for the aircraft industry to be located in or near Fort Worth. Both B. G. and I enjoyed our visit with you and will most assuredly be greatly interested in hearing what progress you are able to make in bringing this matter to the attention of the proper authorities and the reaction received on establishing a forge plant in this area.

Yours very truly,

H. C. Deckard
Night Manager

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