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**Pacific Northwest Laboratory
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Richland, Washington
March 29, 1951

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**SURVEY OF REQUIRED EQUIPMENT CHARGES FOR RMA AND RME LINES,
234-5 BUILDING, INCURRED BY MODEL CHANGES**

The following description of RM Line equipment change requirements is presented as an estimate of the work required to change production to a new model with different external dimensions. This description is not meant to be final, as additional items may become involved after study of the specifications when they become available. However, enough information is available to allow a reasonable estimate to be made of the work required.

Tasks I and II

No changes anticipated.

Task III

~~Batch size and chip recycle problems have not yet been settled. Batch size should not vary beyond the handling capacities of the present S-1 crucible. No changes are anticipated.~~

Task IV

Charge size is as yet uncertain but it is deemed likely that the casting crucible will be reduced in size. This reduction will possibly require a readjustment of the size of the tantalum can and the molybdenum support on the furnace base. Use of the present pouring crucible may be continued, but it may be necessary to change the design of the crucible base. It is

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anticipated that smaller crucibles will be used rather than increasing the wall thickness and incurring more difficult recovery problems for the future. With a reduced crucible size, the possibility of "nesting" crucibles becomes apparent, and studies may be required to determine the feasibility of this operation. However, it must be understood that the downstream unit operations would have to be expanded to handle the increased production resulting from the nesting of crucibles. Only in the event of incorporating final shape machining into the process would space for expanding these operations be available in the present production area. The conveyor adaptor tongs for handling the crucibles will have to be modified to handle a smaller crucible. The pouring crucible rest on the Hood 17 conveyor may have to be modified to fit the new base of the crucible. The rest for the tantalum can may also require changing. In Hood 17-S, the unloading hammer and clamp will have to be modified to handle smaller crucibles. Unless a change is made in the pouring crucible size, the ring inserts for the skull removal equipment will not have to be changed.

Task V

Modifications in Hood 20 must include a new or modified chuck, chuck adaptors, elevator adaptors, flash trimmers, and cutting tools. The chip pans will have to be changed to conform to the new finger spacing on the general conveyor head facelates.

Task VI

In addition to a new set of forming tools, reworking of the pickup platform on the unloading chute in Hood 23 will be required. New roller cones and a new lifter will be required for the turntable in Hood 23-C.

Task VII

New elevator adaptors, tripod tip strippers, and swing arm conveyor hands will be required in all coating hoods. Information received on the new tripod design indicates that these units will be versatile enough to handle a rather wide range of piece sizes. No change is anticipated here.

Task VIII

Modification of the optical gaging turntable, anvil, and a new set of gages, will be required in Hood 24.

Task XII

Modifications for Task XII will include new facelates for the general conveyor heads. The shelf in Hood 28-T will have to be changed to accommodate the new finger spacing on the conveyor.

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Final Inspection Equipment

The following new equipment will be required for the final inspection operation: go and no-go ball gage, one male and one female profile gage, various radius gages, two male and two female electrolytic jigs, approximately 30 bronze storage cups for the vault, and approximately 25 inner shipping containers.

Miscellaneous

Another change which will be required is the modification of the "in line" storage pedestals to accommodate the new conveyor finger spacing.

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