

M.191

20th February, 1962

Mr. G. Foster,
Chef de la Mission Austraiienne,
S.N.E.C.M.A.,
70 Boulevard Kellerman,
Paris 13,
FRANCE.

Dear Sir,

Subject: Salt Baths for Heat Treatment

We acknowledge receipt of P.406 under the above heading.
Our comments are as follows:-

1. Salt bath for hardening heat treatment of carburized gears, etc.

This appears to be straightforward and our existing plant and processing should be adequate. The detail on bath control in P.406 is interesting and could be applicable to our practice. No action required on salts.

2. Salt bath for hardening heat treatment of Stage I S/S compressor blades.

As you have noted the salt used for this application is additional to those in use here and would be in the temperature range between the standard neutral types and the H.S.S. types. Consideration of our existing immersed electrode salt bath set-up indicates that we should maintain the current arrangements involving a neutral salt 750-900°C range for general hardening and pre-heating of H.S.S. tools in the immersed electrode unit E.1265 (reference your copy of the process department heat treatment statement), the H.S.S. high temperature unit E.1228 for tooling and E.1321 for hot quench and salt bath tempering. This means a separate arrangement will be desirable for heating the S/S compressor blade. In view of the small quantities involved at the present time this should be able to be met by the American Gas-fired pot-type salt bath furnace E.346 which will operate satisfactorily at 950°C.

In regard to salts for this processing we should, in the first instance obtain supplies from the S.N.E.C.M.A. source, and arrangements will be made to order 12 cwt. of AC1A3B and 3 cwt. of AC1A No.2 salts. The method of ordering has yet to be finalised, but we will advise you, should any action be required by you.

.../2

M.191
Mr. G. Foster

- 2 -

20th February, 1962

3. Salt bath for heat treatment of High Speed Steel.

It is of interest to note that S.N.E.C.M.A.'s practice with mixing the H.S.S. salts for this purpose. This could be followed up here. No action required on salts.

4. Salt bath for elevated temperature quenching, etc.

Details are noted. No action required on salts.

Yours faithfully,

H. H. KNIGHT

Manager

Per:


C. BELLWARD

LJS/ER

C.c.:
Secretary,
Engine Supt.,
Engine Factory Manager,
Development Engineer, E/D,
Materials Engineer, E/D,
Supply Supt.,
C.N.P.S.,
Process Dept. File (2).