

H.277.

28th May, 1962.

Mr. D. M. Carroll,
Chef de la Mission Australienne,
S.N.E.C.M.A.,
70 Boulevard Kellermann,
Paris 13,
F R A N C E.

Dear Sir,

Subject: Fluorescent Penetrant Flaw Detection.
Inhibition of Ball & Roller Bearings.

With reference to your letter P.467 on the above subjects, we enclose a copy of C.A.C. Process Specifications CAP-50, Fluorescent Penetrant Flaw Detection, and CAP-72, Cleaning and Preservation of Ball and Roller Bearings. These specifications detail the procedures and requirements currently in effect at C.A.C. for these processes which, as you are aware, have been extensively employed for many years on Avon, Nene and other engines and equipment.

The fluorescent penetrant method defined in CAP-50 is based on the original Zyglo method recommended by the Magnaflux Corporation of U.S.A. The composition of the penetrant was developed at C.A.C. as being as similar as possible to the proprietary Zyglo penetrant which we originally procured from the Magnaflux Corporation. During local development of this penetrant, extensive correlative testing was conducted on a wide variety of typical defects and components, to establish the efficacy of this penetrant for the intended applications.

The process has been used at C.A.C. for general purpose flaw detection of non-magnetic components, primarily castings, and for such purposes has proven adequate in revealing all significant defects. It is therefore proposed to utilise this C.A.C. process for the inspection of Atar castings and other general purposes, unless SNECMA establish this is unsatisfactory for such applications.

28th May, 1962.

However, it is recognised that this process may not be satisfactory for any special purpose applications which may be required on Atar components, for which SNECMA might specify a more stringent method of penetrant inspection. Would you please advise whether any such special purpose penetrant inspection methods are required for Atar components and supply full details of same.

With regard to inhibition of ball and roller bearings, while the procedure employed at C.A.C., as detailed in CAP-72, has proven very satisfactory for long term storage of bearings under local conditions, no experience has been gained on this method for overseas transportation and we would hesitate to suggest this should be used by SNECMA for inhibiting of bearings for shipment to Australia.

As Mr. Finch will recall, we have previously experienced considerable difficulties with corrosion of bearings received from overseas, but this appeared to be confined to bearings received from one particular source in the U.K. Bearings received direct from the makers in the U.K., Canada and U.S.A., have never been unsatisfactory in this regard.

Undoubtedly SNECMA, or the local suppliers of bearings to SNECMA, have experience in overseas shipment of bearings and it is suggested they be guided by their own experience and utilise their normal method of inhibition of bearings for overseas shipment.

On receipt of bearings from SNECMA, we will adopt our usual precautionary measures of cleaning and reinhibiting all bearings, during which any corrosion which may have occurred will become evident. In the event of bearings being unsatisfactory in any regard, we would immediately advise accordingly.

Yours faithfully,

H. H. KNIGHT,
Manager.

Per:

C. Bellward
per GDD.
C. BELLWARD

MMS/SL
Enc.