

**GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
RESEARCH AND DEVELOPMENT ORGANISATION
DIRECTORATE OF AERONAUTICS**

TYPE APPROVAL No. : 546

ISSUED TO : M/s MISHRA DHATU NIGAM LTD., HYDERABAD
FOR : **NICKEL BASE HEAT RESISTANT ALLOY SUPERNI
75A (FORGED BARS)**
CO-ORDINATED BY : RCMA (MATERIALS)

This is to certify that SUPERNI-75A (Forged bars) developed and manufactured by M/s. Mishra Dhatu Nigam Ltd., Hyderabad have been tested according to the test schedule No. CRE/REP/1068, dated 27.9.80, laid down by the Directorate of Aeronautics and has been found suitable for aeronautical application in place of AE 435 (Soviet), Nimonic 75 (British) and NC 20T (French) forged bars.


2. The approval Serial No. quoted above must be reflected in all relevant drawings, contracts and release notes.

3. This approval is contingent upon :

- i) Composition and source of supply of raw materials being as per the Annexure-II, A-1 and Annexure-II, A-2 and processing parameters as detailed in Annexure-II, B-1, B-2, B-3 and B-5 of type test record vide Midhani report No. MDN/AMD/TA/003, dated 28 Feb 1987.
- ii) Batches from series production conforming to the requirements laid down in respective material specification of HAL's collaborators except for those modifications which have been made for the properties/composition in type test schedule No. CRE/REP/068, dated 27.9.80.
- iii) Quality Control aspects of bulk production being cleared by DTD&P(Air), Ministry of Defence.

4. In case of transfer of this production process to any other agency or if any change in appendices or in type records are to be effected, prior permission has to be obtained from the Directorate of Aeronautics.

5. This approval is indefinitely valid except when discrepancies are observed during repeat type approval tests as may be called for by this Directorate.


(SURESH.C.GUPTA)
Air Vice Marshal
Director of Aeronautics

No. : AERO/RD-132/117/6/2
Date : 9 Dec. 1987