

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

**TYPE APPROVAL NO : 713**

**ISSUED TO** : M/S MISHRA DHATU NIGAM LTD.,  
P.O. KANCHANBAGH  
HYDERABAD - 500 058.

**FOR** : **NIOBIMUM STABILISED AUSTENITIC STAINLESS  
STEEL MDN 347A SHEETS**

**CO-ORDINATED BY** : RCMA(HYDERABAD)

This is to certify that Niobium Stabilised Austenitic Stainless Steel MDN-347A sheets developed by M/s Mishra Dhatu Nigam Ltd., P.O. Kanchanbagh, HYDERABAD - 500 058 have satisfied all the test requirements laid down by the Directorate of Aeronautics, vide Test schedule NO.CRE(M)/9, dated 05-03-1984. This alloy is acceptable for use in Aeronautical application as equivalent to latest issues of British Specification No.BSS 527; Rolls Royce, Specification MSRR 6523 and AMS 5512F. The components manufactured from MDN-347A may however require separate endurance testing based on their functional requirements/end use.

2. This approval is contingent upon :

- (i) Composition and source of supply of the raw materials being as per Table I and processing parameters as detailed in Annexure IVA to E of Type Record vide report No.MDN/AMD/TA/015, dated 13-04-1993.
- (ii) Quality control aspects of bulk production being cleared by DTD&P(Air), Ministry of Defence.
- (iii) This approval is valid so long as quality consistency in series production is maintained.
- (iv) Compliance of repeat type approval tests should be carried out as called for by Dte of Aeronautics whenever sufficient reasons warrants.

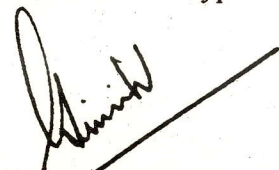
3. The approval serial number quoted above must be reflected on all relevant drawings, contracts and release notes.

4. Prior approval of this Directorate has to be obtained if this type approval or production process is to be transferred to any other agency or if any changes in annexures or in type records are to be effected.

Encl : Type Record

No : AERO/RD-132/117/106/3

Date : 24th Aug. 1993

  
( K. SRINIVASA )  
Director of Aeronautics