

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

TYPE APPROVAL No : 173

ISSUED TO : DEFENCE METALLURGICAL RESEARCH LABORATORY,
HYDERABAD


FOR : NICKEL BASE HEAT RESISTANT ALLOY DMRL-Ni
BILLETS AND FORGED/HOT ROLLED BARS

CO-ORDINATED BY : CRE (MIDHANI)

This is to certify that Nickel Base Heat Resisting Alloy DMRL-Ni developed by Defence Metallurgical Research Laboratory, Hyderabad has satisfied all the test requirements laid down by the Directorate of Aeronautics vide Material Test Specification given at Appendix I. This material may be used as equivalent to Nimonic 75 for aeronautical applications. The components manufactured from DMRL-Ni would however require separate endurance testing based on their functional requirements.

2. Hot rolled bars of Nickel Base Heat Resisting Alloy DMRL-Ni are cleared at present for the manufacture of components of Orpheus series engines listed in Appendix II.
3. This approval is contingent upon the composition of virgin/scrap materials required for the melt, ramming masses for vacuum induction furnace crucible, tundish for pouring and permanent moulds given in Appendix III, and process parameters of vacuum, charging, pouring, forging and rolling as given in Appendix IV, being the same during production as has been followed during type testing.
4. This approval is also contingent upon the quality control aspects of bulk production being cleared by DTD&P (Air), Ministry of Defence, New Delhi.
5. Prior agreement of this Directorate will have to be obtained if this Type Approval is transferred to any other agency or if changes in type record as contained in Appendices I, II, III & IV are effected.

Encl : Appendix I, II, III & IV
No. : AERO/RD-132/127/2
Date : 25 Mar 76


(VIVEK R SINHA)
Director of Aeronautics