

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

TYPE APPROVAL No : 449

ISSUED TO : M/s FIRTH (INDIA) STEEL CO; LTD
F/3, WAGLE INDUSTRIAL ESTATE,
THANE - 400604

FOR : **ESR QUALITY CHROME-VANADIUM STEEL WIRE
(COLD DRAW) GRADE (I) 50 KHFA**

CO-ORDINATED BY : RCMA (NASIK)

This is to certify that ESR quality Chrome-vanadium, steel wire (cold drawn) Grade (I) 50 KHFA designed & developed by M/s Firth (India) steel Co; Ltd has been tested as per test schedule drawn by Directorate of Aeronautics and found suitable as a substitute to USSR steel Grade 50 KHFA, for manufacture of aircraft springs.

2. **Basis for type approval:**

Satisfactory conformity to test schedule No. TS/IND/MAT/ 031 and the test results placed at appendix A and B.

3. The approval serial No. quoted above must be reflected on all relevant drawings, contracts and release notes.

4. This approval is contingent upon the quality control aspects of bulk production being cleared by DTD&P (Air), Ministry of Defence, New Delhi.

5. This approval is valid initially for three years from the date of issue and will have to be renewed subsequently.

6. Prior agreement of Directorate of Aeronautics will have to be obtained if this approval is to be transferred to any other agency or if changes within the Type Record enclosed are effected.

Encl : Appendix A, B

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

Date : 22 Dec. 1983


(S.C. GUPTA)

Air Cmde.
Director of Aeronautics