

**Ministry of Defence
Defence Procurement Agency, ADRP2
Abbey Wood
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BS34 8JH**

OBSOLESCENCE NOTICE

All DTD specifications were declared obsolescent from 1st April 1999. All DTD 900 series approvals also lapsed at that time. The standards will no longer be updated but will be retained as obsolescent documents to provide for the servicing of existing equipment.

Further Guidance

The aim in declaring the specifications obsolescent is to recognise that the documents are not being updated and thus should be used with care by both purchaser and supplier. For example, a specification could contain valid technical information but may also contain type approval clauses that contradict procurement policy and/or use materials that do not comply with environmental legislation. The obsolescent specification can still be used as a basis for a purchase provided that the supplier and purchaser agree suitable changes to the specification within the purchase order/contract.

For the DTD 900 system, each specification has provided an MoD approved material and process. For these items, the declaration of obsolescence will constitute the termination of both the extant MoD approval and the continuing MoD assessment that had underpinned those approvals. Again, the technical content of the document remains valid and can be used by both purchaser and supplier as a basis for a contract but an acceptable (to the parties) approval/assessment procedure would be required.

Aircraft Material Specification

CORROSION-RESISTING STEEL ROD AND WIRE

(Suitable for locking wire)

NOTE:—This specification is one of a series issued by the Ministry of Aviation, either to meet a limited requirement not covered by any existing British Standard for aircraft material or to serve as a basis for inspection of materials the properties and uses of which are not sufficiently developed to warrant submission to the British Standards Institution for standardisation.

1. Chemical composition

1.1. The chemical composition of the material shall be:

	Per cent	
	min.	max.
Carbon	—	0.12
Silicon	—	1.00
Manganese	—	1.00
Nickel	—	1.00
Chromium	12.0	14.0
Sulphur	—	0.045
Phosphorus	—	0.045

1.2. The complete analysis of every cast shall be supplied to the inspector.

2. Process of manufacture

2.1. The steel shall be made by an electric process.

3. Freedom from defects

3.1. The material shall be free from harmful defects.

3.2 Any rod or wire may be rejected for faults in manufacture, although it has been passed previously on chemical composition and mechanical properties.

4. Condition

4.1. The material shall be supplied in a fully softened condition.

5. Selection of test samples

5.1. Rods of the same nominal section and from the same cast of steel shall be grouped in parcels. The total weight of a parcel shall not exceed one cwt. When the weight of a single rod coil exceeds one cwt it shall be regarded as a parcel.

5.2. *Wire in coils* :—Coils of wire of the same nominal section and from the same cast of steel shall be grouped in parcels. The total weight of a parcel containing more than one coil shall not exceed one cwt. When the weight of a single coil exceeds one cwt it shall be regarded as a parcel.

5.3. *Wire in straight lengths* :—Straight lengths of wire of the same nominal section and from the same cast of steel shall be grouped in parcels of not more than one cwt.

5.4. The inspector shall select from each parcel of rods, coils and straight wires one test sample of sufficient length to allow the preparation of test pieces for the tensile and bend tests specified in Clause 6. The test samples shall not be heat treated or mechanically worked before being tested.

6. Mechanical properties

6.1. The mechanical properties obtained from test samples selected as specified in Clause 5 shall be as follows:

Tensile test.

The tensile strength shall be not less than 30 tons per sq in and not more than 40 tons per sq in.

Bend test.

Each sample shall withstand, without cracking, being bent through 180° over a radius equal to the diameter of the wire.

7. Nicked fracture test (for material thicker than ¼in only).

7.1. One end of each rod, coil or straight wire shall be subjected to a nicked fracture test. The rod or wire shall be nicked or sawn so that the area of the portion to be fractured is not less than one half of the sectional area of the sample, and when broken by a minimum number of blows shall show a grey fibrous fracture, free from pipe or other defect. Any rod, coil or straight wire which reveals a defect on fracture shall either be rejected, or submitted to a further nicked fracture test at both ends. If the fractures are satisfactory the rod, coil or straight wire shall be accepted.

8. Re-tests

8.1. If any test sample selected as specified in Clause 5 fails to pass the tests specified in Clause 6, the inspector may reject the parcel represented by that test piece, or at his discretion, adopt one of the following procedures:

- (a) Select for test from the same parcel two further test samples, one of which shall be taken from the rod or wire which failed, unless that rod or wire has been withdrawn by the manufacturer. Test pieces prepared from these further test samples as specified in Clause 5 shall comply with the requirements specified in Clause 6.
- (b) Allow the parcel to be re-softened and re-tested in accordance with Clause 5 and 6.

9. Identification

- 9.1. Rods or wires in straight lengths of the same nominal diameter passed by the inspector shall be made into bundles which shall bear a metal label stamped with the mark of the inspector and such other marking as shall ensure full identification of the material.
- 9.2. Each coil of rod or wire passed by the Inspector shall bear a metal label stamped with the mark of the inspector and such other marking as shall ensure full identification of the material.

Approved for issue,

N. J. L. MEGSON,

Director of Materials and Structures Research and Development.

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