

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

## **OBSOLESCENCE NOTICE**

All DTD specifications were declared obsolescent from 1<sup>st</sup> 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**

**ALUMINIUM-7 PER CENT MAGNESIUM ALLOY**

**BARS, EXTRUDED SECTIONS AND FORGINGS**

*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. Inspection and testing procedure**

1.1. This specification shall be used in conjunction with the relevant sections of British Standard L100 as follows:

Cast ingots, billets and slabs for hot working	...	Sections One and Two.
Extruded or rolled bars and billets for forging	...	Sections One and Three.
Bars for machining and extruded sections	...	Sections One and Four.
Forgings	... ..	Sections One and Seven.

**2. Quality of material**

2.1. The material shall be made from aluminium complying with the requirements of British Standards L.31, L.48 or L.49, and magnesium, with or without approved scrap, at the discretion of the manufacturer.

**3. Chemical composition**

3.1. The chemical composition of the material shall be:

*Copper	... ..	not more than 0.10 per cent.
<b>Magnesium</b>	... ..	not less than 6.5 and not more than 7.5 per cent.
Silicon	... ..	not more than 0.6 per cent.
Iron	... ..	not more than 0.7 per cent.
Manganese	... ..	not more than 0.5 per cent.
*Nickel	... ..	not more than 0.2 per cent.
*Zinc	... ..	not more than 0.1 per cent.
*Lead	... ..	not more than 0.05 per cent.
*Tin	... ..	not more than 0.05 per cent.
*Titanium	... ..	not more than 0.20 per cent.
Chromium	... ..	not more than 0.5 per cent.
<b>Aluminium</b>	... ..	the remainder.

\* Subject to the discretion of the Inspecting Authority, determination of these elements need be made on a small proportion only of the samples analysed.

**4. Condition**

- 4.1. Extruded or rolled bars and billets for forging shall be supplied in the extruded, rolled or forged condition.
- 4.2. Bars for machining and extruded sections shall be supplied in the annealed condition.
- 4.3. Forgings shall be supplied in the annealed condition.

**5. Heat treatment**

None.

## 6. Mechanical properties

6.1. *Tensile test.* The mechanical properties obtained from test pieces selected and prepared as stated in the appropriate clauses of British Standard L.100 shall be as follows:

Test piece from test samples representing	0.1 per cent proof stress tonf/in <sup>2</sup>	Ultimate tensile stress tonf/in <sup>2</sup>	Elongation per cent
	not less than	not less than	not less than
Bars and billets for forging ... ..	7.0	19.0	15
Bars for machining and extruded sections of diameter or minor sectional dimension :			
Not greater than 2 in ... ..	9.0	20.0	18
Greater than 2 in ... ..	8.0	20.0	18
Forgings ... ..	8.0	20.0	18

*NOTE.* Where test pieces are to be cut from forgings themselves, the properties are to be agreed in accordance with Section Seven of British Standard L.100.

Approved for issue,

E. W. RUSSELL,

Director of Materials Research and Development.

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