IMPORTANT:

**Limitation of liability**

The Society wishes to draw special attention to the fact that this Specification includes testing and procedures by which the Design Authority can establish whether a particular manufacturer, prima facie, has the capability to produce hardware in accordance with the appropriate drawings and related specifications.

The Society, its servants or representatives accept no responsibility for the continued quality of hardware items produced against the relevant drawings and specifications, this responsibility remaining with the user.

This Specification forms part of the voluntary standardisation programme of the Society - see Foreword in Volume 1 of this SBAC Standards Handbook.

**SBAC TECHNICAL SPECIFICATION TS96 ISSUE 3**

# METALLIC MATERIALS

## TABLES OF SIMILAR MATERIAL SPECIFICATIONS

**SBAC TECHNICAL SPECIFICATION TS96 ISSUE 3**

# METALLIC MATERIALS

# TABLES OF SIMILAR MATERIAL SPECIFICATIONS

## SCOPE

**This document provides a list of potential alternative metallic material specifications for British National material standards (BS Aerospace and DTD standards). It is not, however, a design document and carries no design authority whatsoever.**

**SBAC TECHNICAL SPECIFICATION TS96 ISSUE 3**

# METALLIC MATERIALS

# TABLES OF SIMILAR MATERIAL SPECIFICATIONS

## INTRODUCTION

1. In view of the difficulty in obtaining material supplies for both new and established designs, the Working Group of the SBAC Metallic Materials Special Interest Group concerned with the Rationalization of Metallic Material Specifications was requested to extend its Terms of Reference to formulate tables of similar materials to provide Potential Alternatives.

2. The Working Group was aware that many of the larger Companies already possessed lists of alternatives appropriate to their own products, but it is hoped that the Tables will be of help to those smaller manufacturing organisations who do not possess approved Design Teams.

3. The attached tables are the result of the Working Group's effort, but it is emphasised that considerable care must be taken before any specific substitution is made. In every case, it will be necessary to obtain local design and quality control approval: additionally the concurrence of the prime Contractor may be required.

4. Before any decision is taken to use an alternative material for a specific part, consideration must be given to all relevant mechanical and metallurgical properties, including:

   Strength, Ruling Section and Hardenability, Weldability, Formability, Processing Response.

5. The AECMA designations quoted are those allocated in accordance with prEN2032-1 Issue P4.

6. Design properties for some of the materials included in this document are available in ESDU 00932.

7. A list of preferred specifications for new designs is contained in TS95 - "SBAC Recommendations for Rationalisation of Metallic Material Specifications to be used for New Designs".

8. A list of alternative materials for SBAC standard parts with design authority for these parts is in the course of preparation and it is hoped to have the first issue available by the end of 2001.

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| SPEC | FORM | TABLE |
|---|---|---|
| B8 | Castings | 7 |
| B21 | Ingots | 7 |
| B23 | Bar, rod, section, forgings, forging stock | 7 |
| B24 | Rod, section | 7 |
| B25 | Rod, section, forgings, forging stock | 7 |
| B26 | Rod, section | 7 |
| B27 | Tube | 7 |
| B28 | Strip, foil, parts | 7 |
| B29 | Strip, foil, parts | 7 |
| B30 | Strip, foil, parts | 7 |
| B31 | Strip, foil, parts | 7 |
| B32 | Rod, section, parts | 7 |
| B33 | Wire, springs | 7 |
| DTD118 | Sheet, strip | 2B |
| DTD142 | Bar, section | 2B |
| DTD150 | Forgings | 1E |
| DTD161 | Rod, wire | 4E |
| DTD167 | Tube | 3C |
| DTD189 | Wire, rivets, split pins | 4E |
| DTD246 | Forgings, forging stock | 1E |
| DTD253 | Tube | 7 |
| DTD271 | Strip | 4E |
| DTD297 | Bar, section | 1C |
| DTD297 | Forgings, forging stock | 1E |
| DTD319 | Tube | 7 |
| DTD372 | Bar, section | 1C |
| DTD503 | Tube | 3C |
| DTD716 | Castings | 1F |
| DTD720 | Rod, wire | 3E |
| DTD722 | Castings | 1F |
| DTD727 | Castings | 1F |
| DTD731 | Forgings, forging stock | 1E |
| DTD735 | Castings | 1F |
| DTD737 | Tube | 2B |
| DTD740 | Tube | 3C |
| DTD5004 | Forgings, forging stock | 1E |
| DTD5005 | Castings | 2A |
| DTD5008 | Castings | 1F |
| DTD5010 | Plate | 1B |
| DTD5013 | Bar | 6B |
| DTD5014 | Bar, section | 1C |
| DTD5015 | Castings | 2A |
| DTD5018 | Castings | 1F |
| DTD5023 | Sheet, strip | 6A |
| DTD5024 | Forgings | 1E |
| DTD5025 | Castings | 2A |
| DTD5030 | Plate | 1B |
| DTD5035 | Castings | 2A |
| DTD5036 | Wire, rivets, split pins | 4E |
| DTD5040 | Plate | 1B |
| DTD5041 | Bar, section | 2B |
| DTD5044 | Bar, section | 1C |
| DTD5045 | Castings | 2A |
| DTD5052 | Plate | 3A |
| DTD5055 | Castings | 2A |
| DTD5062 | Sheet, strip | 3A |
| DTD5070 | Sheet, strip | 1A |
| DTD5073 | Tube | 6C |
| DTD5081 | Plate | 2B |
| DTD5082 | Bar, forgings, forging stock | 3B |
| DTD5086 | Rod, wire, springs | 4E |
| DTD5091 | Sheet, strip | 2B |
| DTD5094 | Forgings | 1E |
| DTD5100 | Plate | 1B |
| DTD5101 | Sheet, strip | 2B |
| DTD5110 | Plate | 1B |
| DTD5111 | Forgings, forging stock | 2B |
| DTD5112 | Sheet | 3A |
| DTD5114 | Bar, section | 1C |
| DTD5120 | Plate | 1B |
| DTD5130 | Plate | 1B |
| DTD5132 | Tube | 3C |
| DTD5142 | Tube | 3C |
| DTD5152 | Wire | 3E |
| DTD5222 | Bar, forgings, forging stock | 3B |
| DTD5232 | Bar, forgings, forging stock | 3B |
| DTD5273 | Bar | 6B |
| DTD5283 | Forging stock | 6D |
| DTD5289 | Castings | 4D |
| DTD5293 | Forgings | 6D |
| DTD5363 | Castings | 6C |
| DTD5636 | Forgings, forging stock | 1E |
| DTD5638 | Bar & wire for fasteners | 5E |
| DTD5639 | Bar & wire for fasteners | 5E |
| HC1 | Castings, remelting stock | 3D |
| HC2 | Castings, remelting stock | 3D |
| HC3 | Castings, remelting stock | 3D |
| HC4 | Castings, remelting stock | 3D |
| HC5 | Castings, remelting stock | 3D |
| HC6 | Castings, remelting stock | 3D |
| HC7 | Castings, remelting stock | 3D |
| HC8 | Castings, remelting stock | 3D |
| HC9 | Castings, remelting stock | 3D |
| HC10 | Castings, remelting stock | 3D |
| HC101 | Castings, remelting stock | 4D |
| HC102 | Castings, remelting stock | 4D |
| HC103 | Castings, remelting stock | 4D |
| HC104 | Castings, remelting stock | 4D |
| HC105 | Castings, remelting stock | 4D |
| HC106 | Castings, remelting stock | 4D |
| HC202 | Castings, remelting stock | 5D |
| HC203 | Castings, remelting stock | 5D |
| HC204 | Castings, remelting stock | 5D |
| HC205 | Castings, remelting stock | 5D |

| SPEC | FORM | TABLE |
|---|---|---|
| L161 | Forgings, forging stock | 1E |
| L162 | Forgings, forging stock | 1E |
| L163 | Sheet, strip | 1A |
| L164 | Sheet, strip | 1A |
| L165 | Sheet, strip | 1A |
| L166 | Sheet, strip | 1A |
| L167 | Sheet, strip | 1A |
| L168 | Bar, section | 1C |
| L169 | Castings | 1F |
| L170 | Bar, section | 1C |
| L171 | Forgings | 1E |
| L172 | Forging stock | 1E |
| L173 | Castings | 1F |
| L174 | Castings | 1F |
| L503 | Tube | 2B |
| L504 | Sheet, strip | 2B |
| L505 | Bar, section | 2B |
| L508 | Bar, section | 2B |
| L509 | Tube | 2B |
| L512 | Bar, section | 2B |
| L513 | Forgings, forging stock | 2B |
| L514 | Forgings, forging stock | 2B |
| L515 | Sheet, strip | 2B |
| S1 | Bar | 3B |
| S14 | Bar, forgings, forging stock | 3B |
| S15 | Bar, forgings, forging stock | 3B |
| S21 | Bar, forgings, forging stock | 3B |
| S28 | Bar, forgings, forging stock | 3B |
| S61 | Bar, forgings, forging stock | 4B |
| S62 | Bar, forgings, forging stock | 4B |
| S70 | Bar, forgings, forging stock | 3B |
| S79 | Bar, forgings, forging stock | 3B |
| S80 | Bar, forgings, forging stock | 4B |
| S82 | Bar, forgings, forging stock | 3B |
| S91 | Bar, forgings, forging stock | 3B |
| S92 | Bar, forgings, forging stock | 3B |
| S93 | Bar, forgings, forging stock | 3B |
| S95 | Bar, forgings, forging stock | 3B |
| S97 | Bar, forgings, forging stock | 3B |
| S98 | Bar, forgings, forging stock | 3B |
| S99 | Bar, forgings, forging stock | 3B |
| S102 | Bar, forgings, forging stock | 3B |
| S105 | Bar, forging stock | 3B |
| S106 | Bar, forgings, forging stock | 3B |
| S111 | Bar, forgings, forging stock | 3B |
| S112 | Bar | 3B |
| S113 | Bar | 3B |
| S114 | Bar, forgings, forging stock | 3B |
| S116 | Bar | 3B |
| S117 | Bar, forgings, forging stock | 3B |
| S119 | Bar, forgings, forging stock | 3B |
| S120 | Bar, forgings, forging stock | 3B |
| S124 | Bar, forgings, forging stock | 4B |

| SPEC | FORM | TABLE |
|---|---|---|
| S125 | Bar, forgings, forging stock | 4B |
| S126 | Bar, forgings, forging stock | 4B |
| S127 | Bar, forgings, forging stock | 4B |
| S128 | Bar, forgings, forging stock | 4B |
| S129 | Bar, forgings, forging stock | 4B |
| S130 | Bar, forgings, forging stock | 4B |
| S131 | Bar, forgings, forging stock | 3B |
| S132 | Bar, forgings, forging stock | 3B |
| S133 | Bar, forgings, forging stock | 3B |
| S134 | Bar, forgings, forging stock | 3B |
| S135 | Bar, forgings, forging stock | 3B |
| S136 | Bar, forgings, forging stock | 3B |
| S137 | Bar | 3B |
| S138 | Bar, forgings, forging stock | 3B |
| S139 | Bar, forgings, forging stock | 3B |
| S140 | Bar, forgings, forging stock | 3B |
| S141 | Bar, forgings, forging stock | 4B |
| S142 | Bar, forgings, forging stock | 3B |
| S143 | Bar, forgings, forging stock | 4B |
| S144 | Bar, forgings, forging stock | 4B |
| S145 | Bar, forgings, forging stock | 4B |
| S146 | Bar, forgings, forging stock | 3B |
| S147 | Bar, forging stock | 3B |
| S148 | Bar, forging stock | 3B |
| S149 | Bar, forging stock | 3B |
| S150 | Bar, forgings, forging stock | 4B |
| S151 | Bar, forgings, forging stock | 4B |
| S152 | Bar, forgings, forging stock | 4B |
| S153 | Bar, forgings, forging stock | 3B |
| S154 | Bar, forgings, forging stock | 3B |
| S155 | Bar, forgings, forging stock | 3B |
| S156 | Bar, forgings, forging stock | 3B |
| S157 | Bar, forgings, forging stock | 3B |
| S158 | Bar, forging stock | 3B |
| S159 | Bar, forging stock | 4B |
| S160 | Bar | 4B |
| S161 | Bar, forgings, forging stock | 4B |
| S162 | Bar, forgings, forging stock | 3B |
| S163 | Bar, forgings, forging stock | 3B |
| S201 | Wire, springs | 3E |
| S202 | Wire, springs | 3E |
| S203 | Wire, springs | 3E |
| S204 | Wire, springs | 3E |
| S205 | Wire, springs | 4E |
| S206 | Rod, wire, springs | 4E |
| S510 | Sheet, strip | 3A |
| S511 | Sheet, strip | 3A |
| S513 | Strip | 3A |
| S514 | Sheet, strip | 3A |
| S515 | Sheet, strip | 3A |
| S516 | Sheet, strip | 3A |
| S517 | Sheet, strip | 3A |
| S524 | Sheet, strip | 4A |
| S525 | Sheet, strip | 4A |

| SPEC | FORM | TABLE |
|---|---|---|
| S526 | Sheet, strip | 4A |
| S527 | Sheet, strip | 4A |
| S528 | Sheet, strip | 4A |
| S529 | Sheet, strip | 4A |
| S530 | Sheet, strip | 4A |
| S531 | Sheet, strip | 4A |
| S532 | Sheet, strip | 4A |
| S533 | Sheet, strip | 4A |
| S534 | Sheet, strip | 3A |
| S535 | Sheet, strip | 3A |
| S536 | Sheet, strip | 4A |
| S537 | Sheet, strip | 4A |
| S538 | Sheet, strip | 4A |
| | | |
| T2 | Tube | 3C |
| T45 | Tube | 3C |
| T51 | Tube | 7 |
| T53 | Tube | 3C |
| T57 | Tube | 3C |
| T60 | Tube | 3C |
| T64 | Tube | 3C |
| T66 | Tube | 4C |
| T67 | Tube | 4C |
| T68 | Tube | 4C |
| T69 | Tube | 4C |
| T72 | Tube | 4C |
| T73 | Tube | 4C |
| T74 | Tube | 4C |
| T75 | Tube | 4C |
| T76 | Tube | 3C |
| T77 | Tube | 3C |
| T78 | Tube | 3C |
| T79 | Tube | 3C |
| T80 | Tube | 4C |
| | | |
| TA1 | Sheet, strip | 6A |
| TA2 | Sheet, strip | 6A |
| TA3 | Bar | 6B |
| TA4 | Forging stock | 6D |
| TA5 | Forgings | 6D |
| TA6 | Sheet, strip | 6A |
| TA7 | Bar | 6B |
| TA8 | Forging stock | 6D |
| TA9 | Forgings | 6D |
| TA10 | Sheet | 6A |
| TA11 | Bar | 6B |
| TA12 | Forging stock | 6D |
| TA13 | Forgings | 6D |
| TA21 | Sheet, strip | 6A |
| TA22 | Bar | 6B |

| SPEC | FORM | TABLE |
|---|---|---|
| TA23 | Forging stock | 6D |
| TA24 | Forgings | 6D |
| TA25 | Bar | 6B |
| TA26 | Forging stock | 6D |
| TA27 | Forgings | 6D |
| TA28 | Wire for fasteners | 6B |
| TA38 | Bar | 6B |
| TA39 | Forging stock | 6D |
| TA40 | Bar | 6B |
| TA41 | Forging stock | 6D |
| TA42 | Forgings | 6D |
| TA43 | Forging stock | 6D |
| TA44 | Forgings | 6D |
| TA45 | Bar | 6B |
| TA46 | Bar | 6B |
| TA47 | Forging stock | 6D |
| TA48 | Forgings | 6D |
| TA49 | Bar | 6B |
| TA50 | Forging stock | 6D |
| TA51 | Forgings | 6D |
| TA52 | Sheet, strip | 6A |
| TA53 | Bar | 6B |
| TA54 | Forging stock | 6D |
| TA55 | Forgings | 6D |
| TA56 | Plate | 6A |
| TA57 | Plate | 6A |
| TA58 | Plate | 6A |
| TA59 | Sheet, strip | 6A |

TS96 LOCATION OF RELEVANT MATERIAL SPECS FOR SUPERSEDED OR WITHDRAWN SPECS

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| DTD1 | S82 | 3B |
| DTD2 | S15 | 3B |
| DTD3 | S157 | 3B |
| DTD4 | S204 | 3E |
| DTD5 | S202 | 3E |
| DTD7 | S97 | 3B |
| DTD8 | S97 | 3B |
| DTD10 | HR205 | 5A |
| DTD12 | S511 | 3A |
| DTD14 | B21 | 7 |
| DTD18 | L103 | 1E |
| DTD19 | S28 | 3B |
| DTD21 | S61 | 4B |
| DTD22 | S62 | 4B |
| DTD23 | DTD161, DTD189 | 4E |
| DTD42 | S526, S527 | 4A |
| DTD43 | S129, S130 | 4B |
| DTD49 | S111 | 3B |
| DTD57 | S524, S525 | 4A |
| DTD59 | L121 | 2A |
| DTD76 | S80 | 4B |
| DTD88 | L513 | 2B |
| DTD89 | T45 | 3C |
| DTD100 | S514 | 3A |
| DTD105 | T80 | 4C |
| DTD110 | L37 | 1G |
| DTD111 | L163, L164 | 1A |
| DTD113 | T64 | 3C |
| DTD124 | S514 | 3A |
| DTD126 | S92 | 3B |
| DTD127 | L512 | 2B |
| DTD130 | L83 | 1C, 1E |
| DTD133 | L51 | 1F |
| DTD137 | S516 | 3A |
| DTD138 | S517 | 3A |
| DTD141 | S511 | 3A |
| DTD144 | S526, S527 | 4A |
| DTD148 | L36 | 1G |
| DTD149 | DTD167 | 3C |
| DTD156 | S129, S130 | 4B |
| DTD166 | S524, S525 | 4A |
| DTD171 | S526, S527 | 4A |
| DTD176 | S129, S130 | 4B |
| DTD178 | T53 | 3C |
| DTD187 | S513 | 3A |
| DTD188 | S114 | 3B |
| DTD197 | B23 | 7 |
| DTD203 | T80 | 4C |
| DTD207 | T66, T67 | 4C |
| DTD209 | L80 | 1A |
| DTD211 | T68, T69 | 4C |
| DTD213 | L59 | 1A |
| DTD215 | S201 | 3E |
| DTD233 | HC402 | 3D |

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| DTD239 | S203 | 3E |
| DTD247 | S131 | 3B |
| DTD252 | L168 | 1C |
| DTD254 | T57 | 3C |
| DTD259 | L512 | 2B |
| DTD265 | B24 | 7 |
| DTD276 | L78 | 1F |
| DTD278 | L80 | 1A |
| DTD281 | L124 | 2A |
| DTD285 | L125 | 2A |
| DTD287 | L51 | 1F |
| DTD289 | L122 | 2A |
| DTD292 | L80 | 1A |
| DTD293 | L83 | 1C, 1E |
| DTD289 | L122 | 2A |
| DTD299 | S91 | 3B |
| DTD303 | L58 | 1G |
| DTD306 | S106 | 3B |
| DTD310 | L56 | 1D |
| DTD323 | B27 | 7 |
| DTD327 | L86 | 1G |
| DTD328 | HR208 | 5A |
| DTD330 | DTD5092, DTD5102 | 3B |
| DTD331 | S99 | 3B |
| DTD342 | L165 | 1A |
| DTD347 | T77 | 3C |
| DTD348 | L503 | 2B |
| DTD351 | L165 | 1A |
| DTD356 | L157 | 1A |
| DTD359 | T53, T77 | 3C |
| DTD363 | L170 | 1C |
| DTD364 | L168 | 1C |
| DTD390 | L163, L164 | 1A |
| DTD408 | T60 | 3C |
| DTD410 | L83 | 1C, 1E |
| DTD412 | HC502 | 7 |
| DTD423 | L85 | 1C, 1E |
| DTD463 | S80 | 4B |
| DTD464 | L63 | 1D |
| DTD473 | S98 | 3B |
| DTD480 | S95 | 3B |
| DTD485 | HC403 | |
| DTD490 | S154 | 3B |
| DTD493 | S531 | 4A |
| DTD498 | B25 | 7 |
| DTD500 | S99 | 3B |
| DTD504 | B26 | 7 |
| DTD519 | S157 | 3B |
| DTD525 | S124 | 4B |
| DTD529 | S125, S126, S127, S128 | 4B |
| DTD546 | L165 | 1A |
| DTD600 | S95 | 3B |
| DTD603 | L156 | 1A |
| DTD606 | L81 | 1A |

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| DTD610 | L164 | 1A |
| DTD619 | L514 | 2B |
| DTD622 | L505 | 2B |
| DTD626 | L504 | 2B |
| DTD634 | L80 | 1A |
| DTD646 | L157 | 1A |
| DTD650 | S112 | 3B |
| DTD653 | L60 | 1A |
| DTD666 | HC9 | 3D |
| DTD683 | DTD5024, DTD5114 | 1C, 1E |
| DTD687 | L88 | 1A |
| DTD703 | HR203 | 5A |
| DTD705 | HC8, HC10 | 3D |
| DTD708 | L126 | 2A |
| DTD710 | L166 | 1A |
| DTD712 | S536 | 4A |
| DTD713 | T79 | 3C |
| DTD715 | S137 | 3B |
| DTD719 | HC404 | |
| DTD721 | L127 | 2A |
| DTD723 | T78 | 3C |
| DTD726 | L505 | 2B |
| DTD729 | L514 | 2B |
| DTD730 | S132 | 3B |
| DTD736 | HR1 | 5B |
| DTD743 | T72, T73 | 4C |
| DTD746 | L167 | 1A |
| DTD747 | HR2 | 5B |
| DTD748 | L128 | 2A |
| DTD749 | L512 | 2B |
| DTD5001 | L515 | 2B |
| DTD5002 | S133 | 3B |
| DTD5003 | DTD5273, DTD5283 | 6B, 6D |
| DTD5006 | S205 | 4E |
| DTD5007 | HR3 | 5B |
| DTD5011 | L508 | 2B |
| DTD5012 | S134 | 3B |
| DTD5016 | T72, T73 | 4C |
| DTD5017 | HR4 | 5B |
| DTD5019 | B27 | 7 |
| DTD5020 | L93 | 1B |
| DTD5021 | L509 | 2B |
| DTD5022 | S135 | 3B |
| DTD5026 | HR650 | 5E |
| DTD5027 | HR202 | 5A |
| DTD5028 | L99 | 1F |
| DTD5033 | TA1 | 6A |
| DTD5046 | S538 | 4A |
| DTD5047 | HR207 | 5A |
| DTD5050 | L95 | 1B |
| DTD5054 | DTD5114 | 1C |
| DTD5060 | DTD5110 | 1B |
| DTD5063 | TA6 | 6A |
| DTD5067 | HR4 | 5B |

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| DTD5072 | HC8, HC10 | 3D |
| DTD5074 | L170 | 1C |
| DTD5076 | HR650 | 5E |
| DTD5077 | HR601 | 5E |
| DTD5080 | L113 | 1A |
| DTD5087 | HR506 | 5E |
| DTD5090 | L97, L98 | 1B |
| DTD5103 | TA45, TA46, TA47, TA49, TA | 6B, 6D |
| DTD5104 | L171, L172 | 1E |
| DTD5113 | TA25 | 6B |
| DTD5123 | TA22, TA23 | 6B, 6D |
| DTD5124 | L170 | 1C |
| DTD5133 | TA21 | 6A |
| DTD5153 | TA48, TA51 | 6D |
| DTD5163 | TA59, TA10 | 6A |
| DTD5172 | HC7, HC9 | 3D |
| DTD5173 | TA11, TA12 | 6B, 6D |
| DTD5183 | TA2 | 6A |
| DTD5192 | S163 | 3B |
| DTD5193 | TA6 | 6A |
| DTD5199 | HC1 | 3D |
| DTD5203 | TA38, TA39, TA40, TA41 | 6D, 6E |
| DTD5209 | HC2 | 3D |
| DTD5212 | S162 | 3B |
| DTD5219 | HC3 | 3D |
| DTD5223 | TA42 | 6D |
| DTD5229 | HC4 | 3D |
| DTD5233 | TA52 | 6A |
| DTD5239 | HC5 | 3D |
| DTD5243 | TA53 | 6B |
| DTD5249 | HC6 | 3D |
| DTD5253 | TA54 | 6D |
| DTD5259 | HC103 | 4D |
| DTD5263 | TA55 | 6D |
| DTD5269 | HC104 | 4D |
| DTD5279 | HC105 | 4D |
| DTD5299 | HC101 | 4D |
| DTD5309 | HC102 | 4D |
| | | |
| HC501 | HC502 | 7 |
| | | |
| HR11 | HR55 | 5B |
| HR54 | S150 | 4B |
| | | |
| L1 | L102 | 1C |
| L3 | L166 | 1A |
| L38 | L164, L163 | 1A |
| L39 | L102 | 1C |
| L40 | L168, L77 | 1C, 1E |
| L43 | L77 | 1E |
| L45 | L168, L77 | 1C, 1E |
| L47 | L165 | 1A |
| L62 | L105 | 1D |
| L64 | L102 | 1C |

TS96 LOCATION OF RELEVANT MATERIAL SPECS FOR SUPERSEDED OR WITHDRAWN SPECS

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| L65 | L77, L168 | 1C, 1E |
| L67 | L116 | 1D |
| L70 | L156 | 1A |
| L71 | L157 | 1A |
| L72 | L163, L164 | 1A |
| L73 | L165 | 1A |
| L76 | L103 | 1E |
| L89 | L166 | 1A |
| L90 | L167 | 1A |
| L104 | L157 | 1A |
| L106 | L156 | 1A |
| L107 | L164 | 1A |
| L108 | L166 | 1A |
| L150 | L157 | 1A |
| L151 | L164 | 1A |
| L152 | L165 | 1A |
| L153 | L164 | 1A |
| L501 | L512 | 2B |
| L502 | L513 | 2B |
| L506 | L514 | 2B |
| L507 | L515 | 2B |
| S2 | S95, S154 | 3B |
| S3 | S510 | 3A |
| S4 | S514 | 3A |
| S6 | S93 | 3B |
| S11 | S95, S154 | 3B |
| S19 | S62 | 4B |
| S35 | S1 | 3B |
| S65 | S97 | 3B |
| S69 | S95, S154 | 3B |
| S81 | S97 | 3B |
| S84 | S511 | 3A |
| S86 | S514 | 3A |
| S90 | S157 | 3B |
| S94 | S154 | 3B |
| S96 | S154 | 3B |
| S103 | S148 | 3B |
| S107 | S157 | 3B |
| S108 | S125, S126 | 4B |
| S109 | S127, S128 | 4B |
| S110 | S129, S130 | 4B |
| S518 | S534 | 3A |
| S519 | S535 | 3A |
| S520 | S524, S525 | 4A |
| S521 | S526, S527 | 4A |
| S522 | S528, S529 | 4A |
| S523 | S530, S531 | 4A |

| WITHDRAWN OR SUPERSEDED SPECIFICATION | REFER TO | |
|---|---|---|
| | SPECIFICATION | TABLE |
| T4 | L105 | 1D |
| T9 | L54 | 1D |
| T35 | T64 | 3C |
| T55 | T66, T67 | 4C |
| T58 | T68, T69 | 4C |
| T59 | T77 | 3C |
| T65 | T77 | 3C |
| TA29 | TA45 | 6B |
| TA30 | TA47 | 6D |
| TA31 | TA48 | 6D |
| TA32 | TA46 | 6B |
| TA33 | TA47 | 6D |
| TA34 | TA48 | 6D |
| TA35 | TA46, TA49 | 6B |
| TA36 | TA47, TA50 | 6D |
| TA37 | TA48, TA51 | 6D |

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TABLE 1A - ALUMINUM ALLOY - SHEET AND STRIP

| SPECIFICATION AND DESCRIPTION | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|
| | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | TEMPER | AECMA (pr)EN | USA |
| L16 | Current | AL-P1200- | H14/H24 | 3996 | AMS4003 |
| L17 | Current | | O | | AMS4001 |
| L59 | Current | AL-P3103- | H16/H26 | 4004 | AMS4008 |
| L60 | Obsolescent | | H12/H22 | | |
| L61 | Obsolescent | | O | | AMS4006 |
| L80 | Obsolescent | AL-P5251- | O | | |
| L81 | Obsolescent | | H16/H26 | | |
| *L88* | *Withdrawn* | AL-P7075- clad | T6/T62 | 2092 | AMS-QQ-A-250/13 - T6/T62 AMS4049 |
| L109 | Current | AL-P2024- clad | T3 | 2090 | AMS-QQ-A-250/5 - T3 AMS4041 |
| L110 | Current | | T42 | 2703 | AMS-QQ-A-250/5 - T42 |
| L113 | Current | AL-P6082- | T6/T62 | 4007 | |
| *L156* | *Withdrawn* | AL-P2014A | T4/T42 | 2395 | |
| L158 | Obsolescent | | | | |
| *L157* | *Withdrawn* | | T6/T62 | 2089 | AMS4029 |
| L159 | Obsolescent | | | | |
| L163 | Obsolescent | AL-P2014A clad | T3 | | |
| L164 | Current | | T4/T42 | 2088 | AMS-QQ-A-250/3 - T4/T42 |
| L166 | Current | | | | |
| L165 | Current | | T6/T62 | 2087 | AMS-QQ-A-250/3 - T6/T62 |
| L167 | Current | | | | |
| DTD5070 | Obsolescent | AL-P2618A clad | T62 | 3552 | |

TABLE 1B - ALUMINUM ALLOY - PLATE

| SPECIFICATION AND DESCRIPTION | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|
| | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | TEMPER | AECMA (pr)EN | USA |
| L93 | Obsolescent | AL-P2014A | T651 | 2124 | AMS4029 |
| DTD5010 | Obsolescent | | T4 | | |
| L95 | Obsolescent | AL-P7075- | T651 | 2126 | AMS-QQ-A-250/12 - T651 AMS4045 |
| L97 | Current | AL-P2024- | T351 | 2422 | |
| L98 | Obsolescent | | T42 | 4247 | AMS-QQ-A-250/4 - T42 |
| L115 | Current | AL-P6082- | T651 | 4202 | |
| DTD5030 | Obsolescent | AL-P2014A clad | T4 | | |
| DTD5040 | Obsolescent | | T6 | | |
| DTD5100 | Obsolescent | AL-P2024- clad | T351 | 4211 (T42) | AMS-QQ-A-250/5 - T351 AMS4034 |
| DTD5110 | Obsolescent | AL-P7075- clad | T6 | | AMS4049 |
| DTD5120 | Obsolescent | AL-P7010- | T7651 | 2684 | AMS4204 |
| DTD5130 | Obsolescent | | T7451 | 2687 | AMS4205 |

## TABLE 1C - ALUMINUM ALLOY - EXTRUDED BAR AND SECTION

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | TEMPER | PRODUCT FORM | AECMA (pr)EN | USA |
| L34 | Obsolescent | AL-P1200- | F/O | Extruded bar & Section | | |
| L44 | Obsolescent | AL-P5251- | F/O | Extruded bar & Section | | |
| L83 | Obsolescent | AL-P2031- | T6/T6511 | Extruded bar & Section | | |
| L85 | Obsolescent | | T6/T6511 | Extruded bar & Section | | |
| L87 | Obsolescent | AL-P2014A | T6 | Hexagonal bar for nuts, couplings & hollow machined parts | | |
| L102 | Obsolescent | | T4511 | Extruded bar & Section | 2100 | |
| | | | | | 2634 (PCGC) | |
| L168 | Current | | T6 | Extruded bar & Section | 2324 | AMS4153 |
| | | | | | 2639 (PCGC) | |
| | | | T6511 | Extruded bar & Section | 2384 | |
| | | | | | 2635 (PCGC) | |
| L111 | Obsolescent | AL-P6082- | T6 | Extruded bar & Section | 2326 | |
| | | | | | 2636 (PCGC) | |
| | | | T6511 | Extruded bar & Section | 4273 | |
| | | | | | 4274 (PCGC) | |
| L160 | Obsolescent | AL-P7075- | T73511 | Extruded bar & Section | 2127 | AMS4167 |
| | | | | | 2632 (PCGC) | |
| L170 | Obsolescent | | T6510 | Extruded bar & Section | 2698 | AMS4168 |
| | | | | | 2707 (PCGC) | |
| | | | T6511 | Extruded bar & Section | 2394 | AMS4169 |
| | | | | | 2631 (PCGC) | |
| DTD297 | Obsolescent | | O | Extruded bar & Section | | |
| DTD372 | Obsolescent | AL-P6063- | T4 | Extruded bar & Section | | |
| DTD5014 | Obsolescent | AL-P2618A | T6511 | Extruded bar & Section | 3553 | |
| DTD5044 | Obsolescent | AL-P7014- | T6511 | Extruded bar & Section | | |
| DTD5114 | Obsolescent | | T6/T6511 | Extruded bar & Section | | |

PCGC = Peripheral Coarse Grain Control

## TABLE 1D - ALUMINUM ALLOY - TUBE

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | TEMPER | TYPE | AECMA (pr)EN | USA |
| L54 | Current | AL-P1200- | F | Hydraulic | | |
| *L116* | *Withdrawn* | | F | Weldable | 2073 | AMS4062<br>WW-T-700/1 |
| L56 | Current | AL-P5251- | O | Hydraulic | | AMS4071<br>WW-T-700/4 (O) |
| L63 | Current | AL-P2014A | T8 | Structural | 2387 | |
| L105 | Current | | T3 | Structural | 3346 | |
| | | AL-P6082- | T4/42 | Structural | 2389 | |
| L114 | Current | | T6/T62 | Structural | 2390 | |
| L117 | Current | AL-P6061- | T6 | Structural | 2392 | AMS4082<br>WW-T-700/6F (T6) |
| L118 | Current | | T6 | Hydraulic | 2813 | AMS4083<br>MIL-T-7081 |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | TEMPER | PRODUCT FORM | AECMA (pr)EN | USA |
| L34 | Obsolescent | AL-P1200- | F/O | Forgings | | |
| | | | F | Forging stock | | |
| L44 | Obsolescent | AL-P5251- | F/O | Forgings | | |
| | | | F | Forging stock | | |
| L83 | Obsolescent | AL-P2031- | T6 | Forgings | | |
| | | | F | Forging stock | | |
| L85 | Obsolescent | | T6 | Forgings | | |
| | | | F | Forging stock | | |
| L77 | Current | AL-P2014A | T6 | Forgings | 2382 | AMS4135 |
| L103 | Obsolescent | | T4 | Forgings | 2383 | AMS4134 |
| L77/L103 | Current | | F | Forging stock | 2485 | |
| L112 | Current | AL-P6082- | T6 | Forgings | | |
| | | | F | Forging stock | | |
| L161 | Obsolescent | AL-P7075- | T73 | Die forgings | 3880 | AMS4141 |
| | | | T73 | Hand forgings | 3881 | |
| L162 | Obsolescent | | T7352 | Hand forgings | 2386 | AMS4147 |
| L161/L162 | Obsolescent | | F | Forging stock | 2488 | AMS4141 |
| L171 | Current | AL-P7014- | T761 | Forgings | | |
| L172 | Current | | F | Forging stock | | |
| DTD5024 | Obsolescent | | T6 | Forgings | | |
| | | | F | Forging stock | | |
| DTD5094 | Obsolescent | | T6 | Forgings | | |
| | | | F | Forging stock | | |
| DTD150 | Obsolescent | | T4 | Forgings | | |
| DTD246 | Obsolescent | | T6 | Forgings | | |
| | | | F | Forging stock | | |
| DTD297 | Obsolescent | | O | Forgings | | |
| | | | F | Forging stock | | |
| DTD731 | Obsolescent | AL-P2618A | T6 | Die & Hand forgings | 2085 | AMS4132 |
| | | | F | Forging stock | 2486 | |
| DTD5004 | Obsolescent | | T6 | Forgings | | |
| | | | F | Forging stock | | |
| DTD5636 | Obsolescent | AL-P7010- | T74 | Die forgings | 2681 | |
| | | | F | Forging stock | 4287 | |

## TABLE 1F - ALUMINUM ALLOY - CASTINGS

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | COMMON NAME | TEMPER | TYPE | AECMA (pr)EN | USA |
| L51 | Obsolescent | | | T5 | Sand castings | | |
| | | | | | Chill castings | | |
| L78 | Obsolescent | | 355 | T6 | Sand castings | | AMS4212 |
| | | | | | Chill castings | | |
| L119 | Current | AL-C21201 | RR350 | T6 | Sand castings | 2725 | |
| L154 | Current | AL-C21001 | | T4 | Sand castings | 2721 | |
| | | | | | Chill castings | 2722 | |
| L155 | Current | | | T6 | Sand castings | 2723 | |
| | | | | | Chill castings | 2724 | |
| L169 | Current | AL-C42201 | A357 | T6 | Sand castings | 2726 | AMS4219 |
| | | | | | Chill castings | 2727 | |
| L99 | Current | AL-C42101 | A356 | T6 | Sand castings | 2728 | AMS4218 |
| | | | | | Chill castings | 2729 | |
| L173 | Current | | | T7 | Chill castings | | |
| L174 | Current | | | T7 | Sand castings | | |
| DTD716 | Obsolescent | | | F | Sand castings | | |
| | | | | | Chill castings | | |
| DTD722 | Obsolescent | | | T5 | Sand castings | | |
| | | | | | Chill castings | | |
| DTD727 | Obsolescent | | | T4 | Sand castings | | |
| | | | | | Chill castings | | |
| DTD735 | Obsolescent | | | T6 | Sand castings | | |
| | | | | | Chill castings | | |
| DTD5008 | Obsolescent | | D712 | T1, T2 | Sand castings | | |
| DTD5018 | Obsolescent | | | T4 | Sand castings | | |
| | | | | | Chill castings | | |

## TABLE 1G - ALUMINUM ALLOY - WIRE FOR THE MANUFACTURE OF SOLID, COLD FORGED RIVETS

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | SUPPLY TEMPER | TEST TEMPER | AECMA (pr)EN | USA |
| L36 | Current | AL-P1050A | F | F | 2114 | QQ-A-430 1100 |
| L37 | Current | AL-P2014A | H13 | T42 | | |
| L58 | Obsolescent | AL-P5056A | O | O | 2628 | QQ-A-430 5056 |
| L86 | Obsolescent | AL-P2217- | F | T42 | 2116 | QQ-A-430 2117 |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | COMMON NAME | TEMPER | TYPE | AECMA (pr)EN | USA |
| *L121* | *Withdrawn* | MG-C18001 | AZ8<br>AZ81A | F | Sand castings | | |
| | | | | | Chill castings | | |
| L122 | Current | | | T4 | Sand castings | | |
| | | | | | Chill castings | | |
| L124 | Obsolescent | | AZ91<br>AZ91A | T4 | Sand castings | | |
| | | | | | Chill castings | | |
| L125 | Obsolescent | | | T6 | Sand castings | | AMS4437 |
| | | | | | Chill castings | | |
| | | | AZ91C | T6 | Investment castings | | AMS4452 |
| L126 | Current | MG-C58002 | ZRE1<br>EZ33A | T5 | Sand castings | 2735 | AMS4442 |
| | | | | | Chill castings | 2736 | |
| L127 | Obsolescent | MG-C83001 | Z5Z<br>ZK51A | T5 | Sand castings | | AMS4443 |
| | | | | | Chill castings | | |
| L128 | Current | MG-C85001 | RZ5<br>ZE41A | T5 | Sand castings | 2738 | AMS4439 |
| | | | | | Chill castings | 2739 | |
| DTD5005 | Obsolescent | MG-C58001 | ZT1<br>HZ321A | T5 | Sand castings | 2733 | AMS4447 |
| | | | | | Chill castings | 2734 | |
| DTD5015 | Obsolescent | MG-C85002 | TZ6<br>ZH62A | T5 | Sand castings | | AMS4438 |
| | | | | | Chill castings | | |
| DTD5025 | Obsolescent | | MSR-A | T6 | Sand castings | | |
| | | | | | Chill castings | | |
| DTD5035 | Obsolescent | MG-C46001 | MSR-B | T6 | Sand castings | 2731 | |
| | | | | | Chill castings | 2732 | |
| DTD5045 | Obsolescent | | ZE63 | T6 | Sand castings | | AMS4425 |
| | | | | | Chill castings | | |
| DTD5055 | Obsolescent | | QE22A- | T6 | Sand castings | | AMS4418 |
| | | | | | Chill castings | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION | COMMON NAME | TEMPER | PRODUCT FORM | AECMA (pr)EN | USA |
| DTD5111 | Obsolescent | | ZTY | F | Forgings & forging stock | | |
| DTD5091 | Obsolescent | | ZM21 | 0 | Sheet & strip | | |
| DTD5101 | Obsolescent | | | H14 | Sheet & strip | | |
| DTD118 | Obsolescent | | AM503 | F | Sheet & strip | | AMS4370 |
| DTD142 | Obsolescent | | M1A | | Bar & extruded section | | |
| DTD737 | Obsolescent | | | | Tube | | |
| DTD5041 | Obsolescent | | ZW6 | T5 | Bar & extruded section | | |
| L508 | Obsolescent | | ZW1 ZK10 | F | Bar & extruded section | | |
| L509 | Obsolescent | | | | Tube | | |
| L515 | Obsolescent | | | | Sheet & strip | | |
| L503 | Obsolescent | | AZM | F | Tube | | |
| L512 | Obsolescent | Al 6.0 Zn 1.0 | AZ61A | | Bar & extruded section | | AMS4350 |
| L513 | Current | | | | Forgings & forging stock | | AMS4358 |
| DTD5081 | Obsolescent | | ZW3 | F | Plate | | |
| L504 | Obsolescent | Zn 3.0 | | | Sheet & strip | | |
| L505 | Obsolescent | Zr 0.6 | | | Bar & extruded section | | |
| L514 | Obsolescent | | | | Forgings & forging stock | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S510 | Obsolescent | Carbon steel, weldable | | | Sheet & strip | | |
| S511 | Obsolescent | Deep drawing carbon steel, weldable | | | Sheet & strip | | |
| S513 | Current | Spring steel | | | Strip | | |
| S514 | Obsolescent | C-Mn steel, weldable | | | Sheet & strip | | |
| S515 | Obsolescent | | | | Sheet & strip | | |
| *S516* | *Withdrawn* | C-Mn steel, weldable | | | Sheet & strip | | |
| *S517* | *Withdrawn* | | | | Sheet & strip | | |
| S534 | Current | Cr-Mo steel, weldable | FE-PL1502 (25CrMo4) | 4130 | Sheet & strip | 2209 | MIL-S-6758 |
| S535 | Current | | | | Sheet & strip | | |
| DTD5052 | Obsolescent | Ni-Cr-Mo-V steel | | | Plate | | |
| DTD5062 | Obsolescent | Mo-B steel, weldable | | | Sheet & strip | | |
| DTD5112 | Obsolescent | 1% Cr-Mo steel, weldable | | | Sheet | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S1 | Obsolescent | Carbon steel | | | Bar | | |
| S14 | Obsolescent | Carbon case hardening steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S15 | Obsolescent | 3% Ni case hardening steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S21 | Obsolescent | '20' carbon steel, weldable | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S28 | Obsolescent | 4% Ni-Cr-Mo steel (air hardening) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S70* | *Withdrawn* | '55' carbon steel (normalized) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S79* | *Withdrawn* | '55' carbon steel (hardened & tempered) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S82 | Current | 4% Ni-Cr-Mo case hardening steel | FE-PL2110 (16NiCrMo16) | | Bar | 2767 | |
| | | | | | Forgings | 2768 | |
| | | | | | Forging stock | 3522 | |
| S91 | Obsolescent | Mild steel (suitable for bearing shells) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S92 | Obsolescent | C-Mn steel, weldable | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S93 | Obsolescent | '40' carbon steel (normalized) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S95 | Obsolescent | 1½% Ni-Cr-Mo steel | | | Bar | | AMS6415 |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S97 | Obsolescent | 2½% Ni-Cr-Mo steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S98 | Obsolescent | 2½% Ni-Cr-Mo steel (high carbon) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S99 | Current | | | | Bar | | AMS6415 |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S102 | Obsolescent | C-Mo steel (manufacture of forged bolts only) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S105 | Obsolescent | Carbon steel (manufacture of forged bolts only) | | | Bar | | |
| | | | | | Forging stock | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S106 | Current | 3% Cr-Mo nitriding steel | | | Bar | | AMS6475 |
| | | | | | Forging stock | | |
| S111 | Obsolescent | Ni-Cr-W valve steel | | | Forgings | | |
| | | | | | Forging stock | | |
| S112 | Obsolescent | Semi-free cutting carbon steel (primarily intended for manufacture of forged nuts) | | | Bar | | |
| S113 | Obsolescent | '40' carbon steel (primarily intended for manufacture of forged nuts) | | | Bar | | |
| S114 | Obsolescent | Mn-Mo steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S116 | Obsolescent | '40' carbon steel (primarily intended for manufacture of machined bolts) | | | Bar | | |
| S117 | Obsolescent | 1% Cr steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S119* | *Withdrawn* | 1½% Ni-Cr-Mo steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S120* | *Withdrawn* | 2½% Ni-Cr-Mo steel (oil hardening) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S131 | Current | High thermal expansion steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S132 | Current | 3% Cr-Mo-V nitriding steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S133* | *Withdrawn* | ¾% Ni-Cr case hardening steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S134 | Obsolescent | 3% Cr-Mo-V steel (air hardening) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S135 | Current | 1% C-Cr steel, suitable for bearings | FE-PL1801 (100Cr6) | 52100 | Bar | 2031 | AMS6440 |
| | | | | | Forgings | 2222 | |
| | | | | | Forging stock | | |
| S136 | Current | 1% C-Cr steel (vacuum arc remelted), suitable for bearings | FE-PL1802 (100Cr6) | 52100 VAR | Bar | 3511 | AMS6444 |
| | | | | | Forgings | 2225 | |
| | | | | | Forging stock | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S137 | Obsolescent | High Cr-Ni free machining steel | | | Bar | | |
| S138 | Obsolescent | 3% Cr-Mo-V steel (vacuum remelted air hardening) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S139 | Obsolescent | 1½ Ni-Cr-Mo steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S140 | Current | 2½% Ni-Cr-Mo steel | FE-PL2105 (31NiCrMo10) | | Bar | 3517 | |
| | | | | | Forgings | 3518 | |
| | | | | | Forging stock | 3520 | |
| S142 | Current | 1% Cr-Mo steel | FE-PL1502 (25CrMo4) | | Bar | 2205 | AMS6370 |
| | | | | | Forgings | 2207 | |
| | | | | | Forging stock | | |
| DTD5082 | Obsolescent | | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S146 | Current | 4% Ni-Cr-Mo air hardening steel (vacuum arc remelted) | FE-PL2109 (36NiCrMo16) | | Bar | 2760 | |
| | | | | | Forgings | 2761 | |
| | | | | | Forging stock | | |
| S147 | Current | ½% Ni-Cr-Mo steel (manufacture of forged bolts & forged nuts) | | | Bar | | |
| | | | | | Forging stock | | |
| S148 | Obsolescent | Low Ni-Cr steel (manufacture of forged bolts only) | | | Bar | | |
| | | | | | Forging stock | | |
| S149 | Current | 1¾% Ni-Cr-Mo steel (manufacture of forged bolts & forged nuts) | | | Bar | | |
| | | | | | Forging stock | | |
| S153 | Current | 2½% Ni-Cr-Mo steel | FE-PL2105 (31NiCrMo10) | | Bar | 2450 | |
| | | | | | Forgings | 2451 | |
| | | | | | Forging stock | 3520 | |
| S154 | Current | | | | Bar | 3519 | |
| | | | | | Forgings | 2455 | |
| | | | | | Forging stock | 3520 | |
| S155 | Current | Ni-Si-Cr-Mo-V steel (vacuum arc remelted) | FE-PL2111 (43NiSiCrMoV7) | 300M | Bar | 2762 | AMS6419 |
| | | | | | Forgings | 2759 | MIL-S-8844 |
| | | | | | Forging stock | | |
| S156 | Current | 4% Ni-Cr-Mo case hardening steel (vacuum arc remelted) | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S157 | Current | 3% Ni-Cr-Mo case hardening steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S158 | Current | 1% Cr-Mo steel (manufacture of forged bolts & forged nuts) | | | Bar | | |
| | | | | | Forging stock | | |
| S162 | Current | 18% Ni-Co-Mo maraging steel (double vacuum melted) | FE-PM2701 (X1NiCoMoTiAl 18-5) | MARAGING 250 G110 | Bar | 3528 | AMS6512 |
| | | | | | Forgings | 3529 | MIL-S-6850 |
| | | | | | Forging stock | 3530 | type III grade 250 |
| DTD5232 | Obsolescent | 18% Ni-Co-Mo maraging steel | | | Bar | | |
| | | | | | Forginqs | | |
| | | | | | Forging stock | | |
| S163 | Current | Ni-Cr-Mo-V steel | | NCMV | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| DTD5222 | Obsolescent | 5% Cr-Mo-V steel (vacuum remelted) | FE-PM1501 (40CrMoV20) | | Bar | 2269 | |
| | | | | | Forgings | 2271 | |
| | | | | | Forging stock | | |

TABLE 3C - NON-CORROSION RESISTING STEELS - TUBE

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | TYPE | AECMA (pr)EN | USA |
| T2 | Obsolescent | 4/1 Ni-Cr steel | | | | | |
| T57 | Obsolescent | | | | | | |
| T45 | Obsolescent | C-Mn steel, weldable | | | | | |
| T64 | Obsolescent | | | | | | |
| T53 | Current | Cr-Mo steel, weldable | FE-PL1502 (25CrMo4) | | | 2247 | AMS6361 |
| T60 | Current | | | | | | AMS6362 |
| T76 | Current | | | | | | |
| T77 | Current | | | | | 2211 | |
| T78 | Current | 2½% Ni-Cr-Mo steel | | | | | |
| T79 | Current | | | | | | |
| DTD167 | Obsolescent | Cr-Mo steel | | | | | |
| DTD503 | Obsolescent | C-Mn steel | | | Hydraulic | | |
| DTD740 | Obsolescent | Mo-B steel, weldable | | | | | |
| DTD5132 | Obsolescent | 1% Cr-Mo steel, weldable | | | | | |
| DTD5142 | Obsolescent | | | | | | |

THIS TABLE CARRIES NO DESIGN AUTHORISATION WHATSOEVER

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HC1 | Obsolescent | Carbon steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC2 | Obsolescent | C-Mn steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC3 | Obsolescent | 1% Cr-Mo low alloy steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC4 | Obsolescent | 3% Cr-Mo steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC5 | Obsolescent | 3% Ni case hardening steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Remelting stock | | |
| HC6 | Obsolescent | 3% Cr-Mo nitriding steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Remelting stock | | |
| HC7 | Current | 3% Cr-Mo steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC8 | Current | | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC9 | Current | Ni-Cr-Mo steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC10 | Current | | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC401 | Current | 18% Ni Maraging steel | | MARAGING | Precision castings | | |
| | | | | | Remelting stock | | |
| HC402 | Current | Cast iron | | | Centrifugal castings | | |
| HC403 | Obsolescent | High Cr cast iron | | | Centrifugal castings | | |

| | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S201 | Current | Cold drawn carbon steel | | | Wire & springs (high duty underground wire) | | |
| S202 | Current | Cold drawn carbon steel | | | Wire & springs (high duty underground wire) | | |
| S203 | Current | Carbon steel | | | Wire & springs (high duty underground wire) | | |
| S204 | Current | Cr-V steel | | | Wire & springs (high duty underground wire) | | |
| DTD720 | Obsolescent | '15' carbon steel | | | Rod & wire (suitable for blind rivets) | | |
| DTD5152 | Obsolescent | 1% Cr-Mo steel | | | Wire (suitable for use as filler material) | | |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | AECMA (pr)EN | USA |
| S524 | Current | Cold rolled 18/10 Cr-Ni steel, Ti stabilized | FE-PA3601 (X6CrNiTi18-10) | 30321 | | |
| S526 | Current | 18/10 Cr-Ni steel, Ti stabilized | | | 3488 | AMS5510 |
| S525 | Current | Cold rolled 18/10 Cr-Ni steel, Nb stabilized | | 30347 | | |
| S527 | Current | 18/10 Cr-Ni steel, Nb stabilized | | | | AMS5512 |
| *S528* | *Withdrawn* | 23/14 Cr-Ni steel, Ti stabilized | | | | |
| *S529* | *Withdrawn* | 23/14 Cr-Ni steel, Nb stabilized | | | | |
| S530 | Obsolescent | 24/17 Cr-Ni steel, Ti stabilized | | | | |
| *S531* | *Withdrawn* | 24/17 Cr-Ni steel, Nb stabilized | | | | |
| S532 | Obsolescent | Cr-Ni-Cu-Mo 'precipitation hardening steel | | FV520S | | |
| S533 | Obsolescent | | | | | |
| S536 | Current | Low carbon 18/10 Cr-Ni steel | FE-PA3901 (X2CrNi19-11) | 30304L | 2467 | AMS5511 |
| S537 | Current | Low carbon 17/12 Cr-Ni-Mo steel | | 30316L | | AMS5507 |
| S538 | Current | Cr-Ni-Mo-V steel | FE-PM1502 (X11CrNiMoVN12-3) | JETHETE M152 FV566 | 2280 | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S61 | Obsolescent | 12% Cr steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S62 | Obsolescent | 12% Cr steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S80 | Current | High Cr-Ni steel | FE-PM3901 (X15CrNi17-3) | 51431 | Bar | 3490 | AMS5628 |
| | | | | | Forgings | 3491 | MIL-S-18732 |
| | | | | | Forging stock | 3365 | |
| S124 | Obsolescent | 12% Cr steel, free machining | | 51416 | Bar | | AMS5610 |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S125* | *Withdrawn* | 23/14 Cr-Ni steel, Ti stabilized | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S126 | Obsolescent | 23/14 Cr-Ni steel, Nb stabilized | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S127* | *Withdrawn* | 24/17 Cr-Ni steel Ti stabilized | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| *S128* | *Withdrawn* | 24/17 Cr-Ni steel Nb stabilized | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S129 | Obsolescent | 18/9 Cr-Ni steel Ti stabilized | FE-PA3601 (X6CrNiTi18-10) | 30321 | Bar | 3487 | AMS5645 |
| | | | | | Forgings | 3468 | |
| | | | | | Forging stock | 3482 | |
| S130 | Current | 18/9 Cr-Ni steel Nb stabilized | | 30347 | Bar | | AMS5646 |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S141 | Obsolescent | 12% Cr steel | | | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S143 | Current | Cr-Ni-Cu-Mo precipitation hardening steel | FE-PM1801 (X5CrNiMoCu Nb14-5) | FV520B | Bar | 2502 | |
| | | | | | Forgings | 2503 | |
| | | | | | Forging stock | | |
| S144 | Current | | | | Bar | 2504 | |
| | | | | | Forgings | 2505 | |
| | | | | | Forging stock | | |
| S145 | Current | | | | Bar | 2506 | |
| | | | | | Forgings | 2507 | |
| | | | | | Forging stock | | |
| S150 | Current | Cr-Mo-V-Nb steel | | FV448 | Bar | | |
| | | | | | Forgings | | |
| | | | | | Forging stock | | |
| S151 | Current | Cr-Ni-Mo-V steel | FE-PM1502 (X11CrNiMoVN 12-3) | JETHETE M152 FV566 | Bar | 2278 | AMS5719 |
| | | | | | Forgings | 2279 | |
| | | | | | Forging stock | | |

TABLE 4B (cont) - CORROSION RESISTING STEELS - BAR, FORGINGS AND FORGING STOCK

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S152 | Current | Cr-Co-Mo-V-Nb steel (consumable electrode remelted) | FE-PM1708 (X9CrCoMo11) | FV535 | Bar | 4244 | |
| | | | | | Forgings | 2494 | |
| | | | | | Forging stock | 4245 | |
| S159 | Current | 12%Cr-Ni-Mo-V steel (suitable for the manufacture of fasteners) | | FV566 | Bar | | |
| | | | | | Forging stock | | |
| S160 | Current | Cr-Ni steel (controlled nitrogen content) | | | Bar | | |
| S161 | Current | Cr-Ni-Mo steel (controlled nitrogen content) | | | Bar | | |

TABLE 4C - CORROSION RESISTING STEELS - TUBE

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| T66 | Current | 18/10 Cr-Ni steel, Nb stabilized | FE-PA3701 | 30347 | Weldable | 3360 (D) | AMS5571 |
| T72 | Current | | | | Hydraulic | 3680 (D) | AMS5556 Seamless |
| T68 | Current | Cold drawn 18/10 Cr-Ni steel, Nb stabilized | | | Structural | | AMS5897 |
| T67 | Obsolescent | 18/10 Cr-Ni steel, Ti stabilized | FE-PA3601 (X6CrNiTi18-10) | 30321 | Weldable | 3489 | AMS5570 |
| T73 | Current | | | | Hydraulic | | AMS5557 Seamless |
| T69 | Obsolescent | Cold drawn 18/10 Cr-Ni steel, Ti stabilized | | | Structural | | AMS5896 |
| T74 | Obsolescent | Low carbon 18/10 Cr-Ni steel | FE-PA3901 (X2CrNi19-11) | 30304L | Weldable | 2468 | AMS5647 |
| T75 | Obsolescent | Low carbon 17/12 Cr-Ni-Mo steel | | 30316L | Weldable | | AMS5653 |
| T80 | Current | 12% Cr steel | | | | | |

D = Draft specification

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HC101 | Current | Cr-Ni-Cu-Mo precipitation hardening steel | | FV520 | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC102 | Current | | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC103 | Current | 23% Cr-Ni-W steel | | H.R. CROWN MAX 30309 | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC104 | Current | 19% Cr-10% Ni steel, Nb stabilized | FE-CM3901 (X8CrNiNb19-11) | 30347 | Precision castings | 3363 | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | 3366 | |
| HC105 | Current | 18% Cr-11% Ni -2.5% Mo steel, Nb stabilized | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |
| HC106 | Current | Cr-Ni-Cu precipitation hardening steel | | | Precision castings | | |
| | | | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| | | | | | Remelting stock | | |

TABLE 4D (continued) - CORROSION RESISTING STEELS - CASTINGS AND REMELTING STOCK

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HC404 | Obsolescent | Cr-Mo cast iron | | | Sand castings | | |
| | | | | | Centrifugal castings | | |
| DTD5289 | Obsolescent | Cr-Ni-3½% Mo steel | | | Investment castings | | |



TABLE 4E - CORROSION RESISTING STEELS - ROD, WIRE AND SPRINGS

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| S205 | Current | Austentic Cr-Ni steel | | | Wire and springs | | |
| DTD161 | Obsolescent | 12% Cr steel | | | Rod and wire (suitable for locking wire) | | |
| DTD189 | Obsolescent | Cr-Ni steel | FE-PA3601 (X6CrNiTi18-10) | | Wire, rivets and split pins (suitable for locking wire) | 2573 | |
| DTD271 | Obsolescent | 12% Cr steel | | | Strip (suitable for magneto-breaker springs) | | |
| DTD5036 | Obsolescent | Low carbon Cr-Ni steel, weldable | FE-PA3901 (X1CrNi18-10) | | Wire, rivets and split pins | 2469 2470 | |
| DTD5086 (to be superseded by S206) | Obsolescent | 17/7 Cr-Ni precipitation hardening steel | | | Rod, wire and springs | | |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HR201 | Current | NI-PH8701 (NiCr20TiAl) | NIMONIC 80A | Sheet, strip & plate | 2191 | |
| HR202 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | Sheet & strip | 2298 | |
| HR203 | Current | NI-PH1201 (NiCr20Ti) | NIMONIC 75 | Sheet & strip | 2302 | |
| | | | | Plate | 2411 | |
| HR204 | Current | NI-PH2301 (NiCr21Fe18Mo9) | HASTELLOY X | Sheet & strip | 2185 | AMS5536 |
| HR205 | Current | NI-PD9001 (NiCu31) | MONEL 400 | Sheet & strip | | AMS4544 |
| HR206 | Current | NI-PH1303 (NiCr20Co13Mo4Ti3Al) | NIMONIC 263 | Sheet & strip | 2203 | AMS5872 |
| | | | | Plate | 2418 | |
| HR207 | Current | | NIMONIC PE16 | Sheet & strip | | |
| | | | | Plate | | |
| HR208 | Current | | INCONEL 600 | Sheet & strip | | AMS5540 |
| | | | | Plate | | |
| HR209 | Current | | NIMONIC PK33 | Sheet & strip | | |
| | | | | Plate | | |
| HR240 | Current | CO-PH4101 (CoCr20W15Ni) | HS25/L605 | Sheet & strip | 4568 | AMS5537 |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HR1 | Current | NI-PH8701 (NiCr20TiAl) | NIMONIC 80A REX 664 | Bar | 2188 | |
| | | | | Forgings | 2189 | |
| | | | | Forging stock | | |
| HR2 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 REX 670 | Bar | 2295 | |
| | | | | Forgings | 2296 | |
| | | | | Forging stock | | |
| HR3 | Current | NI-PD1301 (NiCo20Cr15Mo5Al5Ti) | NIMONIC 105 | Bar | 2179 | |
| | | | | Forgings | 2180 | |
| | | | | Forging stock | | |
| HR4 | Current | NI-PH1701 (NiCr15Co14Al5Ti4Mo4) | NIMONIC 115 | Bar | 4369 | |
| | | | | Forgings | 2197 | |
| | | | | Forging stock | 4370 | |
| HR5 | Current | NI-PH1201 (NiCr20Ti) | NIMONIC 75 REX 724 | Bar | 2306 | |
| | | | | Forgings | 2307 | |
| | | | | Forging stock | | |
| HR6 | Current | NI-PH2301 (NiCr21Fe18Mo9) | HASTELLOY X INCO HX | Bar | 2184 | AMS5754 |
| | | | | Forgings | 2183 | |
| | | | | Forging stock | 3668 | |
| HR10 | Current | NI-PH1303 (NiCo20Cr2OMo5Ti2Al) | NIMONIC 263 REX 736 | Bar | 2199 | AMS5886 |
| | | | | Forgings | 2200 | |
| | | | | Forging stock | | |
| HR40 | Current | CO-PH4101 (CoCr20W15Ni) | HS25 / L605 | Bar | 4567 | AMS5759 |
| | | | | Forgings | 4566 | |
| | | | | Forging stock | 4246 | |
| HR51 | Current | FE-PA2601 (X6NiCrTiMoV26-15) | A286 REX 559 | Bar | 4318 | AMS5731 |
| | | | | Forgings | 2172 | AMS5732 |
| | | | | Forging stock | | |
| HR52 | Current | FE-PA2602 (X4NiCrTiMoV26-15) | A286 (low Ti) | Bar | 3510 | |
| | | | | Forgings | 2174 | |
| | | | | Forging stock | 4314 | |
| HR53 | Current | FE-PA2501 (X4NiCrMoTi43-13) | NIMONIC 901 INCOLOY 901 REX 688 | Bar | 2178 | AMS5660 |
| | | | | Forgings | 2177 | |
| | | | | Forging stock | | |
| HR55 | Current | | NIMONIC PE16 | Bar | | |
| | | | | Forgings | | |
| | | | | Forging stock | | |

## TABLE 5C - HEAT RESISTING ALLOYS - TUBE

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | | AECMA (pr)EN | USA |
| HR401 | Current | NI-PH8701 (NiCr20TiAl) | NIMONIC 80A | | | |
| HR402 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | | 2299 | |
| HR403 | Current | NI-PH1201 (NiCr20Ti) | NIMONIC 75 | | 2294 | |
| HR404 | Current | NI-PH1303 (NiCo20Cr2OMo5Ti2Al) | NIMONIC 263 | | 2202 | |

## TABLE 5D - HEAT RESISTING ALLOYS - CASTINGS AND REMELTING STOCK

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HC202 | Current | NI-CH6301 (NiCr20Nb7Mo6W) | PE10 | Precision castings | 2198 | |
| | | | | Remelting stock | | |
| HC203 | Current | NI-CD7301 (NiCr13Al6Mo5Nb) | INCONEL 713 NIMOCAST 713C | Precision castings | 2192 | AMS5391 |
| | | | | Remelting stock | | |
| HC204 | Current | NI-CD1701 (NiCo15Cr10Al6Ti5Mo3) | INCONEL 100 | Precision castings | 2233 | AMS5397 |
| | | | | Remelting stock | 4368 | |
| HC205 | Current | NI-CH1303 (NiCo20Cr2OMo5Ti2Al) | NIMONIC 263 C263 | Precision castings | 2204 | |
| | | | | Remelting stock | 4384 | |
| HC206 | Current | NI-CH1303 (NiCo20Cr2OMo5Ti2Al) | NIMONIC 263 C263 | Precision castings | 2204 | |
| | | | | Remelting stock | 4384 | |
| HC207 | Current | NI-CD1401 (NiCo10W10Cr9Al6Ta3) | MAR M002 | Precision castings | 4097 | |
| | | | | Remelting stock | 4096 | |
| HC208 | Current | | MAR M246 | Precision castings | | |
| | | | | Remelting stock | | |
| HC209 | Current | | NIMOCAST 713LC | Precision castings | | |
| | | | | Remelting stock | | |
| HC210 | Current | | NIMOCAST PD21 | Precision castings | | |
| | | | | Remelting stock | | |
| HC211 | Current | NI-CH1305 (NiCr16Co10Mo8Al4Ti4) | NIMONIC 1023 C1023 | Precision castings | 4095 | |
| | | | | Remelting stock | 4094 | |
| HC301 | Current | CO-CH1401 (CoCr22NiW) | HS31 STELLITE 31 | Precision castings | 2161 | AMS5382 |
| | | | | Remelting stock | 2660 | |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | AECMA ALLOY DESIGNATION (ISIS) | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| HR501 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | Wire for springs | | |
| HR502 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | Wire for springs | | |
| HR503 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | Wire for thread inserts | | |
| HR504 | Current | NI-PH1201 (NiCr20Ti) | NIMONIC 75 | Bar and wire for fasteners | | |
| HR505 | Current | | INCONEL X750 | Wire for thread inserts | | |
| HR506 | Current | NI-PH1801 (NiCr20Co18Ti) | NIMONIC 90 | Wire for locking | | |
| HR601 | Current | NI-PH8701 (NiCr20TiAl) | NIMONIC 80A | Bar and wire for fasteners | | |
| HR650 | Current | FE-PA2601 (X6NiCrTiMoV26-15) | A286 | Bar and wire for fasteners | | AMS5732 |
| DTD5638 | Obsolescent | NI-PH2601 (NiCr19Fe19Nb5Mo3) | INCONEL 718 | Bar and wire for fasteners | 2952 | AMS5662 |
| | | | | | 2961 | AMS5663 |
| | | | | | 3666 | |
| DTD5639 | Obsolescent | NI-PH1302 (NiCr20Co13Mo4Ti3Al) | WASPALOY | Bar and wire for fasteners | 2959 | AMS5707 |
| | | | | | 2960 | |
| | | | | | 3220 | |

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| TA1 | Current | C.P. | TI-P99001 | TIMETAL 35A | Sheet & strip | 3441 (HR)<br>3497 (CR) | MIL-T-9046 CP4 |
| TA2 | Current | | TI-P99002 | TIMETAL 50A | Sheet & strip | 3442 (HR)<br>3498 (CR) | AMS4902<br>MIL-T-9046 CP3 |
| TA6 | Current | | TI-P99003 | TIMETAL 75A | Sheet & strip | 3443 (HR)<br>3499 (CR) | AMS4901<br>MIL-T-9046 CP1 |
| DTD5023 | Obsolescent | | | TIMETAL 65A | Sheet & strip | | AMS4900<br>MIL-T-9046 CP2 |
| TA10 | Current | Ti 6Al-4V | TI-P64001 | TIMETAL 6-4 | Sheet | | |
| TA56 | Current | | | | Plate | 3464 | AMS4911 |
| TA59 | Current | | | | Sheet & strip | 3456 | AMS4911<br>MIL-T-9046 AB-1 Cond. A |
| TA21 | Current | Ti 2.5Cu | TI-P19001 | TIMETAL 230 | Sheet & strip | 3859 (HR)<br>3860 (CR) | |
| TA52 | Current | | | | Sheet & strip | 3870 (HR)<br>3871 (CR) | |
| TA58 | Current | | | | Plate | | |
| TA57 | Current | Ti 4Al-4Mo-2Sn-0.5Si | TI-P63001 | TIMETAL 550 | Plate | 3459 | |

HR = Hot rolled
CR = Cold rolled

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| DTD5013 | Obsolescent | C.P. | | TIMETAL 35A | Bar | | |
| | | | | | Section | | |
| TA3 | Obsolescent | | TI-P99002 | TIMETAL 50A | Bar | 3460 | |
| | | | | | Section | | |
| DTD5273 | Obsolescent | | | TIMETAL 65A | Bar | | |
| TA7 | Current | | TI-P99003 | TIMETAL 100A | Bar | 3461 | AMS4921 |
| | | | | | Section | | MIL-T-9047 CP70 Cond. A |
| TA11 | Current | Ti 6Al-4V | TI-P64001 | TIMETAL 6-4 | Bar | 3311 | AMS4928 |
| | | | | | Section | 3355 | MIL-T-9047 6Al-4V Cond. A |
| TA28 | Current | | | | Wire for fasteners | 3353 | AMS4965 MIL-T-9047 6Al-4V Cond.STA |
| TA22 | Obsolescent | Ti 2.5Cu | TI-P19001 | TIMETAL 230 | Bar | 3462 | |
| | | | | | Section | | |
| TA53 | Obsolescent | | | | Bar | 3463 | |
| | | | | | Section | | |
| *TA25* | *Withdrawn* | Ti 11Sn-5Zr 2.2Al-1Mo-0.2Si | | TIMETAL 679 | Bar | | |
| TA38 | Current | Ti 4Al-4Mo-4Sn-0.5Si-O.1C | | TIMETAL 551 | Bar | | |
| TA40 | Current | | | | Bar | | |
| TA45 | Current | Ti 4Al-4Mo-2Sn-0.5Si | TI-P63001 | TIMETAL 550 | Bar | 3466 | |
| | | | | | Section | | |
| TA46 | Current | | | | Bar | 3466 | |
| | | | | | Section | | |
| TA49 | Current | | | | Bar | 3466 | |
| | | | | | Section | | |

## TABLE 6C - TITANIUM ALLOYS - TUBE AND CASTINGS

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| DTD5073 | Obsolescent | C.P. | | TIMETAL 65A | Tube | | AMS4942 |
| DTD5363 | Obsolescent | Ti 6A1-4V | TI-C64001 | TIMETAL 6-4 | Castings | 3352 | AMS4985<br>AMS4991 |

## TABLE 6D - TITANIUM ALLOYS - FORGINGS AND FORGING STOCK

| SPECIFICATION AND DESCRIPTION | | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|---|
| | | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ALLOY | AECMA ALLOY DESIGNATION | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| TA4 | Obsolescent | C.P. | TI-P99002 | TIMETAL 50A | Forging stock | 3451 | |
| TA5 | Obsolescent | | | | Forgings | 3452 | |
| DTD5283 | Obsolescent | | | TIMETAL 65A | Forging stock | | |
| DTD5293 | Obsolescent | | | | Forgings | | |
| TA8 | Obsolescent | | TI-P99003 | TIMETAL 100A | Forging stock | 3453 | AMS4921<br>MIL-T-9047<br>CP70 |
| TA9 | Obsolescent | | | | Forgings | 3496 | AMS4921 |
| TA12 | Current | Ti 6Al-4V | TI-P64001 | TIMETAL 6-4 | Forging stock | 3310 | AMS4928 |
| TA13 | Current | | | | Forgings | 3312 | MIL-T-9047<br>6Al-4V |
| TA23 | Obsolescent | Ti 2.5Cu | TI-P19001 | TIMETAL 230 | Forging stock | 3454 | |
| TA24 | Obsolescent | | | | Forgings | 3495 | |
| TA54 | Obsolescent | | | | Forging stock | 3455 | |
| TA55 | Obsolescent | | | | Forgings | 3494 | |
| *TA26* | *Withdrawn* | Ti 11Sn-5Zr<br>2.2Al-1Mo-0.2Si | | TIMETAL 679 | Forging stock | | |
| *TA27* | *Withdrawn* | | | | Forgings | | |
| TA39 | Current | Ti 4Al-4Mo-<br>4Sn-0.5Si-O.1C | | TIMETAL 551 | Forging stock | | |
| TA41 | Current | | | | | | |
| TA42 | Current | | | | Forgings | | |
| TA43 | Obsolescent | Ti 6Al-5Zr<br>0.5Mo-0.25Si | Tl-P65001 | TIMETAL 685 | Forging stock | 3321 | |
| TA44 | Obsolescent | | | | Forgings | 3322 | |
| TA47 | Current | Ti 4Al-4Mo-<br>2Sn-0.5Si | TI-P63001 | TIMETAL 550 | Forging stock | 3465 | |
| TA50 | Current | | | | | | |
| TA48 | Current | | | | Forgings | 3351 | |
| TA51 | Current | | | | | | |

| SPECIFICATION AND DESCRIPTION | | | | | SIMILAR SPECIFICATIONS | |
|---|---|---|---|---|---|---|
| | | | | | PREFERRED | OTHERS |
| BS/DTD | STATUS | ISO ALLOY DESIGNATION | COMMON NAMES | PRODUCT FORM | AECMA (pr)EN | USA |
| *B8* | *Withdrawn* | Cu Sn1O | Phosphur bronze | Castings | | |
| *B21* | *Withdrawn* | | White metal | Ingots | | |
| B23 | Current | Cu Al10 Ni5 Fe4 | Aluminium bronze C63200 | Rod | | AMS4640 AMS4880 |
| | | | | Section | | |
| | | | | Forgings | | |
| | | | | Forging stock | | |
| B24 | Current | Cu Sn8 | Phosphur bronze | Rod | | |
| | | | | Section | | |
| B25 | Current | Cu Ni3 Si | | Rod | | |
| | | | | Section | | |
| | | | | Forgings | | |
| | | | | Forging stock | | |
| B26 | Current | | | Rod | | |
| | | | | Section | | |
| B27 | Current | Cu Zn14 Al1 Ni1 Si1 | TUNGUM | Tube - hydraulic | | |
| DTD253 | Obsolescent | | | Tube | | |
| DTD319 | Obsolescent | | | Rod | | |
| B28 | Current | Cu Be1.9 | Beryllium copper BERYLCO 25 C17200 | Strip, foil | | AMS4530 |
| B29 | Current | | | Strip, foil | | |
| B30 | Current | | | Strip, foil | | AMS4532 |
| B31 | Current | | | Strip, foil | | |
| B32 | Current | | | Rod, section | | AMS4533 |
| | | | | | | AMS4650 |
| B33 | Current | | | Wire, springs | | |
| HC502 | Current | Cu Al9.5 Ni5 Fe5 | Aluminium bronze C95500 | Castings | | |
| T51 | Obsolescent | Cu | Copper | Tube - high pressure | | |

# APPENDIX 1

## REQUIREMENTS FOR ORDERING -AECMA Material Standards.

## SBAC RECOMMENDATION

When utilising AECMA material standards the order shall be used to further define the dimensions of the semi-finished product. Additionally the rules for Designation of semi-finished products, prEN 2600, shall be followed.

This method of designation links the material standard and the appropriate dimensional standard for the semi-finished product form. It also gives detail on the actual dimensions of the semi-finished product.

SBAC recommends that the designation shall comprise as a minimum the identity block, limited to 15 characters, as defined in clause 5.1 of prEN 2600. Method B as described in 5.1.2.3 is the recommended method of defining dimensions as this provides definition of all the main dimensions of the semi-finished product. Method A gives only dimension(s) characteristic of the cross-section of the semi-finished product.

To derive or interpret these designations the following references are required:

prEN 2600 Aerospace series - Metallic materials - Designation of semi-finished products - Rules.

TR 3970 Aerospace series - Codes for the designation of metallic semi-finished products.

- This is a technical report published by AECMA and gives the coding system for dimensions, needed for method B designation.

TR 2410 Aerospace series - Relationship between dimensional standards and metallic material standards.

- This technical report provides a list of dimensional standards and material standards to which they may apply. Additionally, as it gives the title of the dimensional standard and the material family to which it applies, it may also he used as a guide as to which dimensional standard is appropriate for a material standard not listed in the current edition of TR 2410.

prEN 4258 Aerospace series - General organization of standardization - Links between types of EN standards and their use.

- This shows the relationship between the various standards related to metallic material semi-finished products and may be found useful.

**Example of use**

Identity block for Aluminium alloy 2014A sheet to be ordered in the as-rolled condition for final use in the T62 condition to material standard EN 2088, 1,2mm thick, 1200mm wide and 2400mm long. The dimensional standard applicable to this semi-finished product is prEN 2071.

Identity block = EN2089F29AMMRNN

in which; EN 2089 is the material standard, written without the space.

F is the as-rolled supply condition code, taken from the material standard.

29 is the code for the dimensional standard EN2071 from annex A of TR 3970.

AM, MR and NN are the codes for the dimensions 1,2 , 1200 and 2000mm as given in annex B of TR 3970, in the order thickness, width and length as defined by table 2 of prEN 2600.

**Incomplete data**

The use of zeros, as 0000 or 00 is recommended in the following cases of incomplete data:

In a small number of cases an appropriate dimensional standard may not yet exist - in these cases the dimensional standard may be replaced by 0000 and tolerances of size and form shall be by agreement between supplier and purchaser.

Similarly, where one of the normally specified dimensions as in table 2 of prEN 2000 is to remain deliberately unspecified this dimension may be represented by 00.

# APPENDIX 2

## Limitation of liability

The Society wishes to draw special attention to the fact that this Specification includes testing and procedures by which the Design Authority can establish whether a particular manufacturer, prima facie, has the capability to produce hardware in accordance with the appropriate drawings and related specifications.

The Society, its servants or representatives accept no responsibility for the continued quality of hardware items produced against the relevant drawings and specifications, this responsibility remaining with the user.

This Specification forms part of the voluntary standardisation programme of the Society - see Foreword in Volume 1 of this SBAC Standards Handbook.