TECHNICAL SPECIFICATION	TS95™ AR	ISSUE 8
	Issued 2014-06	
Amendment Record for Technical Specification No. TS95		

NOTE: The issue status of this document remains unchanged as there have been no changes to the technical content.

SAE INDUSTRY TECHNOLOGIES CONSORTIA AEROSPACE STANDARDS AND PART QUALIFICATION PROGRAM

FOREWORD

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AMENDMENT RECORD

No. TS95-AR

for
Technical Specification
No. TS95

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Doc issue & issue date	Ref : View, Fig, Para , Table etc	Description & Reason of change	Sponsor / Company
Issue 8 **June 2014** (note – this AR document did not exist prior to this issue)	Title	Title changed from "SBAC RECOMMENDATIONS FOR METALLIC MATERIAL SPECIFICATIONS FOR NEW DESIGNS" to "ADS RECOMMENDATIONS FOR METALLIC MATERIAL SPECIFICATIONS & STANDARDS TO BE USED FOR NEW DESIGNS"	G L Purdue MBDA UK
	Foreword	Format updated to reflect change of organisation name from SBAC to ADS.	
	Section 1 (New)	Scope section added.	
	Section 2 (New)	"Referenced Documents" section with referenced documents added.	
	Section 3	Introduction section revised.	
	Section 4	Title changed from "INDEX OF SPECIFICATIONS" to "INDEX OF MATERIAL SPECIFICATIONS & STANDARDS". Table updated to suit below changes.	
	Section 5	Section Heading "TABLES OF MATERIALS & SPECIFICATIONS/STANDARDS" added before Tables.	
	Table 1A	Withdrawn BS L 156 deleted. Withdrawn BS L 109 deleted. Withdrawn BS L 110 deleted. Withdrawn BS L 157 deleted. Condition T42 added to AL-P6061- T4. Condition T62 added to AL-P6061- T6. Entry for elevated temperatures Clad AL-P2618A-T6 – EN 3552 – DTD 5070 deleted. Entry for fully weldable very low strength alloy 3103 deleted following withdrawal of BS L 59 & BS L 61. Withdrawn AL-P6082- T4/T6 & BS L 113 deleted. Entry for High Strength alloy AL-P7075- T6 & EN 2092 deleted, following withdrawal of BS L 88. New entry for Weldable, Cryogenic prEN 4100 & AL-P2219- T6/T62 added. Entry for prEN 4450 added to AL-P7050- T762. Entry for prEN 4449 added to Clad AL-P7050- T76. Entry for Very High Strength alloy AL-P7050- T761 deleted. Entry for SPF alloy AL-P7475- T763 was AL-P7475- 02.	

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Issue 8 (continued)	Table 1B	Withdrawn BS L 97 deleted. Entry for Clad AL-P2124- T351 alloy deleted following withdrawal of DTD 5100. Entry for prEN 4247 added to alloy AL-P2024- T42 (T42 was T4) & withdrawn BS L 98 deleted. Entry for Clad AL-P2224- T6151 alloy deleted following withdrawal of DTD 5040. Entry for AL-P2618A-T851 alloy deleted following withdrawal of prEN 2123. Entry for prEN 2626 replaced by prEN 4457. Entry for Weldable AL-P6082- T651 alloy deleted following withdrawal of prEN 4202 & BS L 115. Withdrawn DTD 5130 deleted. Withdrawn DTD 5120 deleted. Entry for Very High Strength (premium material) alloy AL-P7055-T77 withdrawn because no specification exists.	
	Table 1C	New column highlighting Peripheral Course Grain Control (PCGC) added with footnote to suit. Entry for Elevated Temp AL-P2618A- T811 alloy deleted following withdrawal of EN 3553 & DTD 5014. Entry for prEN 2127 added to AL-P7075- T7353 alloy. Entry for Weldable AL-P6082- T6511 withdrawn due to EN 2326 & BS L 111 being withdrawn. Entry for prEN 2631 added to AL-P7075- T6511. Entry for Very High Strength (premium material) alloy AL-P7055-T77 withdrawn because no specification exists.	
	Table 1D	Withdrawn BS L 103 deleted. Withdrawn BS L 161 deleted. Withdrawn BS L 162 deleted. Withdrawn DTD 5636 deleted. Entry for Elevated Temp AL-P2618A- T6 alloy deleted following withdrawal of EN 2085 & DTD 731. Entry for Weldable AL-P6082- T6 alloy deleted following withdrawal of BS L 112. Entry for prEN 4448 added to AL-P7050- T7452. Entry for Medium Strength AL-P7010- T7454 deleted because no specification exists. Entry for High Strength AL-P7050- T7652 deleted because no specification exists.	
(Continued on next page)	Table 1E	Temper T42 deleted from prEN 2391 & prEN 3557. Entry for Structural AL-P2024- T3511 deleted because prEN 2814 was never issued. Both entries for Weldable AL-P6082- T6 alloy deleted because no longer preferred by ADS MMSIG.	

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Issue 8 (continued)	Table 1F	Designation for prEN 2725 changed from AL-C19001 to AL-C21201 Designation for prEN 2726 changed from AL-C23001 to AL-C42201 Designation for prEN 2727 changed from AL-C23001 to AL-C42201 Designation for prEN 3124 changed from AL-C23001 to AL-C42201 Designation for prEN 3125 changed from AL-C23001 to AL-C42201 Designation for prEN 2728 changed from AL-C23002 to AL-C42101 Designation for prEN 2729 changed from AL-C23002 to AL-C42101 Designation for prEN 3122 changed from AL-C23002 to AL-C42101 Designation for prEN 3123 changed from AL-C23002 to AL-C42101	
	Table 1G (New)	New Table “ALUMINIUM ALLOYS – WIRE (FOR FASTENERS)” added.	
	Table 2	prEN 2738 & prEN 2739 deleted against Mg-Zn-RE1.3-Zr0.7 alloy because they are inactive for new design. Mg-Y4.0-RE3.0-Zr0.5 entry deleted because prEN 3850 was never issued.	
	Table 3A	prEN 2246 (FE-PL1502) deleted (Not issued). prEN 3772 (FE-PL2103) deleted (Not issued). Tensile strength of prEN 3519 reduced from 900 MPa to 880 MPa. 300M : Tensile strength reduced from 1930 MPa to 1900 MPa & prEN 2762 (FE-PL2111) deleted. DTD 5082 replaced by BS S 164 & designation FE-PL1502 deleted FE-PL2110 deleted against BS S 156. FE-PL1507 deleted against BS S 132. New entry prEN 3508 (FE-PL3501) added to nitriding steel. New entry prEN 3509 (FE-PL3501) added to nitriding steel.	
	Table 3B	prEN 2455 (FE-PL2105) deleted (Inactive for new design). prEN 3518 (FE-PL2105) deleted (Inactive for new design). DTD 5082 replaced by BS S 164 & designation FE-PL1502 deleted. prEN 3558 (FE-PL2103) deleted because it was never issued. prEN 2248 (FE-PL1502) deleted because it was never issued. FE-PL2110 deleted against BS S 156. FE-PL1507 deleted against BS S 132. New entry Form – Wire for Springs prEN 3367 (FE-PL8701) added. 300M : Tensile strength reduced from 1930 MPa to 1900 MPa.	
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Issue 8 (continued)	Table 4A	Entry for 17-7PH CH900 (FE-PM3902) spring strip deleted because no specification exists. FE-PL3701 designation deleted from BS S 527 entry. 1240 MPa tensile strength added to prEN 2540. 1240 MPa tensile strength added to prEN 3679. Designation FE-PA3701 deleted against BS S 130. Designation FE-PM3802 replaced by FE-PA1802 against prEN 3479. New entry EN 2399 & BS HR 650 (A286 alloy) for fasteners added. prEN 2171 replaced by prEN 4318. prEN 2493 replaced by prEN 4244. Bar 17-4PH Condition H1100 replaced by Condition H1150. prEN 2539 replaced by prEN 3161. Bar 17-4PH H1150 tensile strength reduced from 960 to 930 MPa. Entry for Bar 17-4 PH H1025 FE-PM3801 deleted. Bar 15-5PH H1100 FE-PM3802 deleted. Entry for Bar PH13-8Mo H1050 tensile strength reduced from 1220 to 1200 MPa.	
	Table 4B	Forging 17-4PH Condition H1100 replaced by Condition H1150 & prEN 2772 replaced by prEN 3678 & tensile strength reduced from 960 MPa to 930 MPa. Forging 17-4PH H1025 (FE-PM 3801) deleted. Forging 15-5PH H1100 designation FE-PM3802 replaced by FE-PA1802 & tensile strength increased from 960 MPa to 965 MPa. Forging 15-5PH H1025 designation FE-PM3802 replaced by FE-PM1802. Forging 15-5PH H900 designation FE-PM3802 replaced by FE-PM1802 Hydraulic Tube AISI 347 replaced by AISI 321 & FE-PA3701 replaced by FE-PA3601 & BS T 73 added. Structural Tube AISI 347 replaced by AISI 321 & designation FE-PA3701 & prEN 3360 deleted & BS T 66 added. Withdrawn Wire DTD 5036 deleted. Wire AISI 301 replaced by AISI 321 & withdrawn DTD 189 deleted. Entry for wire 17-7PH CH900 (FE-PM3902) deleted because no specification exists. New Forgings entry for PH13-8Mo H1000 prEN 3486 (FE-PM 1503) added. New Wire entry for A286 EN 2399 (FE-PA2601) & BS HR 650 for forged fasteners added.	
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Issue 8 (continued)	Table 5A	Entry for Sheet & Strip Haynes 25 prEN 2165 replaced by prEN 4568. Entry for Sheet & Strip NIMONIC 86 (NI-PH3901) prEN 4092 deleted because no specification exists. Entry for Bar PE 16 (BS HR 55) deleted. Entry for Plate Nimonic 75 prEN 2411 (NI-PH1201) deleted because inactive for new design. Entry for Plate C263 prEN 2418 (NI-PH1303) deleted because inactive for new design. Entry for Plate Inconel 718 prEN 2408 (NI-PH2601) deleted because inactive for new design. Bar Hastelloy X - prEN 2182 replaced by prEN 2184. Entry for Nimonic 86 (NI-PH3901) deleted. Bar Haynes 25 - prEN 2164 replaced by prEN 4567. Bar Inconel 718 - withdrawn DTD 5638 deleted from Bar & wire for machined fasteners. Bar Inconel 718 - prEN 2952 added to Bar for forged fasteners. Bar Inconel 718 - prEN 3219 added for bar & wire for forged or extruded fasteners. Bar Inconel 718 - prEN 2404 replaced by prEN 4376 from High strength, lower temp alloy. Weldable. Enry for Bar PE 16 (BS HR 55) Medium strength precipitation hardening alloy deleted. Bar Waspaloy - withdrawn DTD 5639 deleted. Bar Waspaloy - prEN 2959 & prEN 3220 added.	
	Table 5B	Forgings Nimonic 75 - prEN 2307 (NI-PH1201) deleted because inactive for new design. Forgings FWR Stock Nimonic 75 - prEN 2308 (NI-PH1201) deleted because inactive for new design. Forgings FWR Stock Hastelloy X - prEN 2184 replaced by prEN 3668. Forgings Haynes 25 - prEN 2163 replaced by prEN 4566. Forgings C263 - prEN 2200 deleted because inactive for new design. Forgings FWR Stock Inconel 718 - prEN 4377 added. Entry for Forgings PE 16 (BS HR 55) Medium strength precipitation hardening alloy deleted. Tube Inconel 625 - prEN 4381 added. Castings C1023 - NI-CD1702 replaced by NI-CH1305. Castings MAR M002 - NI-CH1305 replaced by NI-CD1401.	
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Issue 8 (continued)	Table 6	Sheet & Strip CP - prEN 3443 corrected from cold rolled to hot rolled. Entry for Sheet & Strip 2.5 Cu Annealed (BS TA 21) alloy sheet & strip deleted. Entry for Sheet & Strip 6Al-2Sn-4Zr-2Mo (TI-P65002) high temperature alloy deleted. Bar 6Al-4V Solution treated & aged - prEN 3353 replaced by EN 3813. Forgings 6Al-4V Annealed - withdrawn BS TA 13 deleted Tube 3Al-2.5V - TI-P64002 replaced by TI-P64003. Forgings Timetal 550 - withdrawn BS TA 48 & TA 51 deleted. Entry for Tube 3Al-2.5V Annealed – (TI-P64002) deleted. Castings 6Al-4V Annealed - withdrawn DTD 5363 deleted.	
	Table 7	Rod, Section & Forgings CuNi2Si changed to CuNi3Si. Strip, Foil, Rod, Section & Wire CuBe2CoNi changed to CuBe1.9.	
	Appendix	Appendix (Requirements for Ordering AECMA Material Standards – SBAC Recommendations) deleted in its entirety because : a) The publication of BS EN 4258:1998 (Metallic materials - General organization of standardisation - Links between types of EN standards & their use) dissociated the links between the material standard & the dimensional standards & designation standard for semi-finished products & makes their use optional. b) Method-B of prEN 2600 requires the use of ASD-STAN Technical Report TR 3970 (Aerospace series Codes for the designation of metallic semi-finished products) has never been published.	
		To create your next entry, use menu command route : "Table – Insert – Rows Below" Never use Split Cells.	