SAE International SAE Standards Works

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AMS2406N - Plating, Chromium, Hard Deposit

Overview	Summary
Type: 28 Day Revised Start Date: May 6, 2014 Due: Jun 2, 2014 Sponsor: Kevin Groeneveld View Final Draft **To:** AMS B Finishes Processes and Fluids Committee	Please respond to the 28 Day limited scope ballot below. DO YOU APPROVE THIS DECISION AS SHOWN IN THE FILE(S) ATTACHED? Respondents to this ballot are acting as individuals and are not representing any group or organization. A statement explaining the basis for disapproval must accompany all negative ballots. Ballots close at 12:00 midnight (9:00pm Pacific) on due date.

Ballot Results

Approve	Disapprove	Waive	Participation
19	1	2	22/32
59.4%	3.1%	6.2%	68.8%

Ballot Responses View Summary of Replies

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Jason Scheuring AMSB 06/02/2014 19:52 PM

Informational Comment on Section/Paragraph: 0

Add Reply

Waive

Chet Blum AMSB 06/02/2014 18:44 PM APPROVE

David Satlawa AMSB 06/02/2014 18:29 PM APPROVE

Informational Comment on Section/Paragraph: 3.3

Add Reply

Under current requirements (AMS 2406M), The coating supplier (per para 3.3 of AMS 2406) is directed to AMS 2759/9 for Hydrogen Embrittlement Relief for Chrome Plated parts with a Hardness level of 36 HRC or above.

Then per AMS 2759/9D para. 1.2:

1) Parts heat treated to a minimum 40 HRC or above is Baked IAW Table 1 or 2 as applicable.

2) For threaded fasteners (36HRD from AMS 2604) to < 40HRC is Baked per Table 1 note (7)

Is it necessary to change the current requirement, to now start baking non threaded fasteners with a hardness of 36 - 40 HRC?

Note: (From Other Plating Specifications including AMS2406), currently 6 different methods of specifying Hydrogen Embrittlement Bake requirements;

A] From AMS 2406M para 3.3 Treatment of parts 36 HRC and above shall be IAW AMS 2759/9

B] AMS 2400X para 3.3 Treatment of steel parts shall be IAW AMS 2759/9, except all parts plated per this specification HRC 36 and higher shall be baked (revised language at Rev "X", at rev "W" Treatment of steel parts IAW with AMS 2759/9, Hardness driven by AMS 2759/9 and not plating spec.

C] AMS 2401H para 3.3, after hot water rinsing, treatment IAW AMS 2759/9

AMS 2403 (except for parts that get brazed), para 3.3 Bake IAW AMS 2759/9

AMS 2405D para. 3.3 (when post plate heat treatment not specified), then for steel parts, Bake IAw AMS 2759/9

AMS 2410J para 3.3 Bake IAW AMS 2759/9

AMS 2411F para 3.3 Bake IAW AMS 2759/9

AMS 2417H para 3.3 Bake IAW AMS 2759/9

AMS 2422E para 3.3 Bake IAW AMS 2759/9

AMS 2424E para 3.3 Bake IAW AMS 2759/9

AMS 2438C para 3.3 Bake IAW AMS 2759/9

D] AMS2412H para. 3.3 for parts 40 HRC and above, bake IAW AMS 2759/9

E] AMS 2413E bake IAW AMS 2759/9 except use parameters as specified for cadmium.

F] AMS 2418G bake IAW parameters specified in AMS 2418, does not reference AMS 2479/9

AMS 2425E bake IAW parameters specified in AMS 2425, does not reference AMS 2479/9

AMS2460(-) [deriving from AMS-QQ-C-320), bake IAW parameters specified in AMS 2460, does not reference AMS 2479/9

Informational Comment on Section/Paragraph: **4.2.2, 4.2.3, 4.3.2**

Add Reply

Concur with proposed changes for Adhesion Testing from Lot to Daily Periodic per Generic Alloy Group (AS2390); referencing language already adopted in AMS 2417 (to maintain language consistency).

Daniel Graves	AMSB	05/30/2014 17:59 PM	APPROVE
Vishwanath Sahay	AMSB	05/29/2014 13:33 PM	DISAPPROVE

Technical Comment on Section/Paragraph: **Section 3.3**

Add Reply

The current statement should only be changed to "Treatment of steel parts 40 HRC and above shall be in accordance with AMS2759/9". Unless the subject part is a fastener, embritlement relief for parts under 40 HRC is not required. For fasteners with HRC 34 or higher, baking should be done per Note 7 of Table 1 in AMS2759/9.

Kevin Rankin	AMSB	05/28/2014 16:30 PM	APPROVE
Robert Koukol	AMSB	05/28/2014 12:11 PM	APPROVE
Rebecca Wyss	AMSB	05/27/2014 16:10 PM	WAIVE
Roger Sines	AMSB	05/27/2014 13:04 PM	APPROVE
Ray Kremer	AMSB	05/27/2014 10:44 AM	APPROVE
Gregory Haataja	AMSB	05/27/2014 08:40 AM	APPROVE
Colister Dickson	AMSB	05/27/2014 08:21 AM	APPROVE
Michael Niedzinski	AMSB	05/26/2014 12:38 PM	WAIVE
Robert Steffen	AMSB	05/22/2014 14:56 PM	APPROVE
Cheryl Lewis	AMSB	05/22/2014 08:41 AM	

Technical Comment on Section/Paragraph: 3.3

Add Reply

Agree with the "treatment of steel parts 40 HRC and above shall be in accordance with AMS 2759/9 statement to match that spec. The statement for the 36-39 HRC, regardless of alloy type using the minimum bake soak times in table for for lower strength carbon, low alloy, tool steel shouldn't be added. This catagory of steels is for 180 ksi and above or 40 HRC. Why add an unecessary embrittlement bake cycle?

Allison Warren AMSB 05/21/2014 15:50 PM

Informational Comment on Section/Paragraph: All

Add Reply

Approve

Charles Himmelblau AMSB 05/20/2014 19:11 PM

Technical Comment on Section/Paragraph: 4.2.1

Add Reply

When did "current practice" determine that Adhesion should become a periodic test? It is probably the most basic requirement on a plating, and nonconformance (due to poor surface preparation) is a frequent problem. Adhesion should remain an Acceptance test.

Charles Beargie AMSB 05/20/2014 12:44 PM

Informational Comment on Section/Paragraph: All

Add Reply

Approve

Alex Pohoata AMSB 05/19/2014 13:55 PM

Informational Comment on Section/Paragraph: 0.0

Add Reply

Approve

Daniel Backus	AMSB	05/16/2014 13:55 PM	APPROVE
Bohdan Hasiuk	AMSB	05/15/2014 14:11 PM	APPROVE
Jacque Bader	AMSB	05/15/2014 14:02 PM	APPROVE
James Green	AMSB	05/14/2014 14:36 PM	

Informational Comment on Section/Paragraph:

Add Reply

Approve

William Brooks	AMSB	05/10/2014 17:51 PM	

Informational Comment on Section/Paragraph: 1

Add Reply

Approve

Stan Biernat	AMSB	05/08/2014 12:05 PM	APPROVE
Craig Willan	AMSB	05/07/2014 08:09 AM	APPROVE
Hitoshi Takeda	AMSB	05/07/2014 03:22 AM	

Technical Comment on Section/Paragraph: all

Add Reply

Approve

Ken Sabo	AMSB	05/06/2014 21:23 PM	APPROVE
James Oshea	AMSB	05/06/2014 15:11 PM	APPROVE

Informational Comment on Section/Paragraph: 4.3.1 -Table 1

Add Reply

Remove the "and Adhesion" from the Table 1 sampling for acceptance testing since this appears to be a periodic test with this change.

Tim Boysen	AMSB	05/06/2014 14:16 PM	APPROVE
Roger Eybel	AMSB	05/06/2014 12:49 PM	APPROVE

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