

F1070
Revision Level A
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MIL-S-1222 REV. H-(2) MODS

F1070-19960324

WHENEVER REFERENCE IS MADE TO MILITARY SPECIFICATION MIL-S-1222 REVISION H, INTERIM AMENDMENT 2, THE FOLLOWING MODIFICATIONS SHALL ALSO APPLY.

PAGE 8 TABLE I;
ADD NEW ENTRY UNDER "COPPER ALLOYS,
SILICON BRONZE", AS FOLLOWS;

MATL GR	FASTNR TYPE	CHEMICAL REQMT GOVT/INDUS. STD	IDENT. MARKING
651	STUD, BOLT HEX CAP SCREW	ASTM-F468	651
651	NUT	ASTM-F467	651

PAGE 9
TABLE I FOOTNOTE 6 (F); INSERT "651" BEFORE
"655".

PAGE 11 TABLE II; UNDER "FULL-SIZE FASTENERS
TENSILE STRENGTH" FOR GRADE 5 STEEL, DELETE
"120-150", "105-150" AND "90-150" AND
SUBSTITUTE "120-155", 105-155" AND "90-155"
RESPECTIVELY.

TABLE II; UNDER "FULL-SIZE FASTENERS, TENSILE
STRENGTH" FOR GRADE 8 STEEL, DELETE
"150-170" AND "140-170" AND SUBSTITUTE
"150 MINIMUM" AND "140 MINIMUM"
RESPECTIVELY.

PAGE 3 OF AMENDMENT 2 TABLE II; FOR 300
SERIES CORROSION RESISTANT STEELS, DELETE
SECTION OF HORIZONTAL LINE IMMEDIATELY ABOVE
"316,321".

PAGE 12 TABLE II; INSERT "651" BEFORE "655"
UNDER "COPPER ALLOYS, GRADE".

PAGE 15 TABLE IV; INSERT "651" BEFORE "655"
UNDER "COPPER ALLOYS, GRADE".

PAGE 17 PARA. 3.7.1; FOR "ELECTRODEPOSITED
ZINC COATING", DELETE CLASS FE/ZN 13." AND
SUBSTITUTE "CLASS FE/ZN 8."

FOR "MECHANICALLY DEPOSITED ZINC COATING",
DELETE "CLASS 12." AND SUBSTITUTE "CLASS 8."

PAGE 18 PARA. 3.7.1.2 UNDER "COATING
THICKNESS (MIN)" FOR ASTM-B633, DELETE
"0.0005 INCH" AND SUBSTITUTE "0.0003 INCH".
UNDER "COATING THICKNESS (MIN)" FOR
ASTM-B695, DELETE "0.0005 INCH" AND
SUBSTITUTE "0.0003 INCH".

PAGE 6 OF AMENDMENT 2 PARA 3.9; AFTER
"ORDER OF PRECEDENCE:", DELETE "MATERIAL
SYMBOL, LOT NUMBER, MANUFACTURER'S SYMBOL."
AND SUBSTITUTE "MATERIAL SYMBOL,
MANUFACTURER'S SYMBOL, LOT NUMBER".

PAGE 27 PARA 4.2; DELETE AND SUBSTITUTE:
4.2 INSPECTION LOT. FOR THE PURPOSE OF
INSPECTIONS, TESTS, IDENTIFICATION AND
TRAECABILITY, A LOT SHALL BE DEFINED AS
EITHER (A) OR (B) BELOW (SEE 6.2.1):

- (A) A LOT OF FASTENERS SHALL CONSIST OF
FINISHED FASTENERS OF ONE PART NUMBER
(I.E., THE SAME MATERIAL TYPE, GRADE AND
CONDITION, STYLE, CLASS, PLATING/COATING,
NOMINAL DIAMETER, LENGTH AND THREADING)
PRODUCED FROM THE SAME HEAT/LOT OR MELT
OF METAL, SAME PROCESSING OF RAW
MATERIAL, HEAT TREATED IN THE SAME BATCH
OR HEAT-TREATED BY A CONTINUOUS PROCESS
UNDER THE SAME CONDITIONS OF TIME AND
TEMPERATURE, AND OFFERED FOR INSPECTION
AT ONE TIME.
- (B) A LOT OF FASTENERS SHALL CONSIST OF
FINISHED FASTENERS OF ONE PART NUMBER
(I.E., THE SAME MATERIAL TYPE, GRADE
AND CONDITION, STYLE, CLASS, PLATING,
COATING, NOMINAL DIAMETER, LENGTH, AND
THREADING) PRODUCED UNDER THE SAME
CONDITIONS INCLUDING HEAT-TREATMENT
AND OFFERED FOR INSPECTION AT ONE TIME."

PAGE 30 PARA 4.4.4; AFTER "AS SPECIFIED IN"
DELETE "TABLE II." AND SUBSTITUTE "TABLES
II AND III."

PARA 4.4.4.1; ADD "AXIAL TENSILE STRENGTH
TESTS PERFORMED PER PARAGRAPH 4.4.4 MAY BE
SUBSTITUTED FOR WEDGE TENSILE STRENGTH TESTS
FOR: FASTERNERS GREATER THAN 1-1/2 INCH
NOMINAL SIZE; OR, FASTENERS WHERE THE LENGTH
IS INSUFFICIENT FOR THE TESTING EQUIPMENT."

PARA 4.4.4.3; DELETE "TABLE II" AND
SUBSTITUTE "TABLES II AND III".

PAGE 31 TABLE XIII; ADD "6" AFTER "TEST ON
FULL SIZE FASTENERS".

TABLE XIII ADD NEW FOOTNOTE:

6-BOLTS, SCREWS AND STUDS WHICH ARE TOO
SHORT OR HAVE INSUFFICIENT THREADS FOR WEDGE
TENSILE, AXIAL TENSILE, ELASTIC PROOF LOAD,
AND YIELD STRENGTH TESTS SHALL BE TESTED BY
PREPARING AND TESTING STANDARD TENSION TEST
SPECIMENS FROM EACH LOT OF BAR STOCK FROM
WHICH THE BOLTS, SCREWS AND STUDS ARE
MADE. THE TEST SPECIMENS SHALL BE
SUBJECTED TO THE SAME HEAT-TREATMENT AS THE
BOLTS, SCREWS AND STUDS. FOR FASTENERS MADE
WITH COLD WORKING, TENSION SPECIMENS MUST
BE MADE FROM FINISHED FASTENERS. THE PARENT
BAR STOCK MAY NOT BE USED TO DETERMINE THE
PHYSICAL PROPERTIES OF COLD WORKED FASTENERS.

PAGE 7 OF AMENDMENT 2 PARA 4.4.4.6; DELETE
AND SUBSTITUTE;

4.4.4.6 ALTERNATE MECHANICAL TESTING.
CERTIFIED MECHANICAL TEST REPORTS (SEE 4.5)
FURNISHED BY THE BAR STOCK SUPPLIER WHICH
DEMONSTRATE COMPLIANCE WITH THE MECHANICAL
PROPERTY REQUIREMENTS (TENSILE STRENGTH,
YIELD STRENGTH, PERCENT ELONGATION,
REDUCTION OF AREA, AND HARDNESS) OF TABLES
II, III AND IV MAY BE SUBSTITUTED FOR
MECHANICAL PROPERTY TEST REQUIREMENTS OF
TABLE XIII PROVIDED THAT EACH OF THE
FOLLOWING CONDITIONS ARE SATISFIED:

- A. BOLTS, SCREWS, STUDS OR NUTS WERE
FABRICATED SOLELY BY MACHINING WITHOUT
FURTHER HEAT-TREATMENT OR COLD WORKING.
- B. LOT DEFINITION (A) IS SPECIFIED AND
MARKING OR IDENTIFICATION IS MAINTAINED
TO ENSURE TRACEABILITY TO THE RAW
MATERIAL.
- C. MANDATORY MECHANICAL TESTS (WEDGE AND
PROOF STRESS) ON FULL SIZE FASTENERS ARE
PERFORMED ON FINISHED FASTENERS AS
SPECIFIED IN TABLE XIII.

ADD NEW PARAGRAPH:

4.4.4.6.1 SIZE LIMITATIONS. WHEN BOLTS
AND STUDS ARE MACHINED FROM HEAT TREATED

BAR STOCK, THE FOLLOWING REQUIREMENTS APPLY WHEN USING MECHANICAL TEST RESULTS FROM THE BAR STOCK:

1. FOR STUDS, THE NOMINAL DIAMETER OF THE FINISHED STUD SHALL NOT BE LESS THAN ONE-HALF THE NOMINAL DIAMETER OF THE HEAT TREATED BAR STOCK.
2. FOR BOLTS GREATER THAN 1/2-INCH NOMINAL DIAMETER, THE NOMINAL DIAMETER OF THE FINISHED BOLT SHALL NOT BE LESS THAN ONE-HALF THE NOMINAL DIAMETER OF THE HEAT TREATED BAR STOCK.
3. FOR BOLTS LESS THAN OR EQUAL TO 1/2-INCH NOMINAL DIAMETER, THE NOMINAL DIAMETER OF THE FINISHED BOLT SHALL NOT BE LESS THAN ONE-QUARTER THE NOMINAL DIAMETER OF THE HEAT TREATED BAR STOCK.

THESE LIMITATIONS ARE NOT APPLICABLE IF TESTING IS PERFORMED ON FULL SIZE FASTENERS OR ON TENSILE SPECIMENS MACHINED FROM FULL SIZE FASTENERS.

PAGES 35 AND 36 TABLE XV; FOR "METALS TO BE JOINED- STEEL AND STEEL, CRES AND STEEL" IN COLUMNS "LESS THAN 5/8 INCH DIAMETER" AND "5/8 INCH DIAMETER OR GREATER", DELETE "SILICON BRONZE, GRADES 655, 661" AND SUBSTITUTE "SILICON BRONZE, GRADES 651, 655, 661".

FOR "METALS TO BE JOINED - STEEL AND ALUMINUM ALLOYS" IN COLUMNS "LESS THAN 5/8 INCH DIAMETER" AND "5/8 INCH DIAMETER OR GREATER", DELETE "SILICON BRONZE, GRADES 655, 661" AND SUBSTITUTE "SILICON BRONZE, GRADES 651, 655 661".

FOR METALS TO BE JOINED - COPPER AND COPPER ALLOYS" IN COLUMNS "LESS THAN 5/8 INCH DIAMETER" AND "5/8 INCH DIAMETER OR GREATER" DELETE "SILICON BRONZE, GRADES 655, 661" AND SUBSTITUTE "SILICON BRONZE, GRADES 651, 655 661".

PAGE 37 TABLE XVI UNDER "COATING TYPE, ZINC COATING", DELETE "CLASS 12" AND "CLASS FE/ZN 13" AND SUBSTITUTE "CLASS 8" AND "CLASS FE/ZN 8" RESPECTIVELY.

TABLE XVI DELETE FOOTNOTE 2 AND SUBSTITUTE: 2-WITHIN ONE HOUR AFTER COATING, ALLOY STEEL

FASTENERS SHALL BE BAKED AT A MINIMUM OF
190 DEG C. FOR A MINIMUM OF 24 HOURS TO
PROVIDE HYDROGEN EMBRITTLEMENT RELIEF."