

4600501 STRUCTURAL STEEL AND MISCELLANEOUS METALS  
INTERNAL/INDUSTRY REVIEW COMMENTS

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Comments: (10-3-16)

The Grade 5 Bolts fall under the Society of Automotive Engineers (SAE) classification, while A325 is an obsolete ASTM specification. ASTM A325 bolts are more commonly specified by engineers for use in structural steel connections on heavy construction projects, while SAE Grade 5 bolts are more common in OEM-type applications. It is either a grade 5 bolt or an A325 bolt. The word "Grade A325" is confusing. Would you want them to follow the ASTM F3125? Type I or 3? Use structural bolts meeting the requirements of F3125 bolt types. (It just may need a little clarification.)

Response: ASTM F3125 lists the bolt Grades. Please see below:

chemical composition.				
1.3.3 Bolts are designated by style denoting Heavy Hex bolts or "Twist-Off" Style assemblies.				
Grade	Min. Strength	Type		Style
A325	120 ksi	1	3	Heavy Hex Head
A325M	830 MPa	1	3	Heavy Hex Head
F1852	120 ksi	1	3	Twist-Off
A490	150 ksi	1	3	Heavy Hex Head
A490M	1040 MPa	1	3	Heavy Hex Head
F2280	150 ksi	1	3	Twist-Off
Type 1 - 120 ksi (830 MPa) - carbon steel, carbon boron steel, alloy steel or alloy steel with boron addition				
3.1.3 Size: Including nominal bolt diameter and bolt length, and thread pitch if other than standard.				
3.1.4 Grade: A325, A325M, A490, A490M, F1852 or F2280.				
3.1.5 Type: Type 1 or Type 3. When Type is not specified either Type 1 or Type 3 may be furnished at the supplier's option.				
3.1.6 Style: Heavy Hex or Twist-Off Style.				

No changes made.

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Comments: (10-4-16)

Agree with the noted revisions with the following exception the fourth paragraph under Item 4 of Section 460-5.1 should read as follows: Use Grade A490 bolts only with the approval of the Engineer. Submit procedures in accordance with ASTM F3125 Grade A490 for the handling, lubrication, installation, tightening and testing of such bolts. Do not install Grade A490 bolts without prior approval of the procedures by the Engineer.

Response: Agree, will make changes.

## Changes made.

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