Click to prove you're human

100%(1)100% found this document useful (1 vote)420 views2 pagesThis document discusses ASTM F1554 grade 105 anchor bolts. These anchor bolts are made from medium carbon alloy steel that is heat treated to have a minimum yield strength of 105 ksi. They c…SaveSave F1554 Grade 105 - F1554 Anchor Bolts For Later100%100% found this document useful, undefined100%(1)100% found this document useful (1 vote)420 views2 pagesThis document discusses ASTM F1554 grade 105 anchor bolts. These anchor bolts are made from medium carbon alloy steel that is heat treated to have a minimum yield strength of 105 ksi. They can be galvanized without affecting properties. They should not be welded as welding could change their mechanical properties achieved through heat treating. Optional Charpy impact testing at specific temperatures is available. Grade 105 bolts have specific mechanical requirements for tensile strength, yield strength, elongation and reduction of area. Recommended nuts and washers for use with grade 105 bolts are also provided.100%(1)100% found this document useful (1 vote)420 views2 pagesThis document discusses ASTM F1554 grade 105 anchor bolts. These anchor bolts are made from medium carbon alloy steel that is heat treated to have a minimum yield strength of 105 ksi. They c… This info and more on our specialized F1554 Microsite The ASTM F1554 specification was introduced in 1994 and covers anchor bolts designed to anchor structural supports to concrete foundations. F1554 anchor bolts can take the form of either headed bolts, straight rods, or bent anchor bolts. The three grades 36, 55, and 105 designate the minimum yield strength (ksi) of the anchor bolt. The bolts can be either cut or roll threaded and a weldable grade 55 can be substituted for grade 36 at the supplier’s option. Color coding on the end – 36 blue, 55 yellow, and 105 red – helps facilitate easy identification in the field. Permanent manufacturer and grade marking is allowed under the S2 supplementary requirements. Applications for F1554 anchor bolts include columns in structural steel framed buildings, traffic signal and street lighting poles, and overhead highway sign structures to name just a few. F1554 Grades F1554 Grade 36 Low carbon, 36 ksi yield steel anchor bolts F1554 Grade 55 High strength, low alloy, 55 ksi yield steel anchor bolts F1554 Grade 105 Alloy, heat treated, high strength 105 ksi yield steel anchor bolts Supplementary Testing Supplementary requirements shall apply only when specified in the purchase order or contract. S1: Weldable version of the Grade 55 specification. Through chemical composition restrictions and by a carbon equivalency formula, S1 provides assurance of weldability. When S1 is not specified, the Grade 55 material may or may not be weldable. S2: Permanent manufacturer’s identification on the end of the anchor bolt that projects from the concrete. S3: Permanent grade identification on the end of the anchor bolt that projects from the concrete, in lieu of color-coding. S4: Charpy Impact requirements at +40ºF (+5ºC) for grades 55 and 105. The minimum Charpy V-notch energy requirement is an average of 15ft-lbs for three specimens, with no one specimen falling below 12ft-lbs. Charpy Impact requirements at -20ºF (-29ºC) for grade 105. The minimum Charpy V-notch energy requirement is an average of 15ft-lbs for three specimens, with no one specimen falling below 12ft-lbs. F1554 Mechanical Properties Grade Marking Size inches Tensile, ksi Yield, ksi min Yield, MPa min Elong. % min RA % min 36 1⁄2 - 4 58 - 80 36 248 23 40 55 1⁄2 - 2 75 - 95 55 380 21 30 21⁄4 - 21⁄2 75 - 95 55 380 21 30 23⁄4 - 3 75 - 95 55 380 21 30 31⁄4 - 4 75 - 95 55 380 21 30 105 1⁄2 - 3 125 - 150 105 724 15 45 Stamping of F1554 bolts with manufacturer's identification is a supplemental requirement (S2) Color coding is required unless the grade is stamped in accordance with supplemental requirement (S3). When Grade 36 is specified, a weldable Grade 55 may be furnished at the supplier's option. F1554 Chemical Properties Element Grade 36 Grades 55 and 105 Sizes up to 3/4 Sizes over 3/4 to 1-1/2 Sizes over 1-1/2 to 4 Carbon (max) 0.26% 0.27% 0.28% Manganese * 0.60 - 0.90% 0.60 - 0.90% Phosphorus, max 0.04% 0.04% 0.04% 0.040% Sulfur, max 0.05% 0.05% 0.05% 0.050% Copper, min (when specified) 0.20% 0.20% 0.20% 0.20% * Optional with the manufacturer but shall be compatible with weldable steel F1554 Recommended Hardware Grade Identification Size Inches Recommended A563 Nut Washer Plain Finish Hot-Dip or Mechanical Zinc Coated Grade Style Grade Style 36 1⁄2 – 11⁄2 A Hex A Hex F436 15⁄8 – 4 A Heavy Hex A Heavy Hex 55 1⁄2 – 11⁄2 A Hex A Heavy Hex F436 15⁄8 – 4 A Heavy Hex A Heavy Hex 105 1⁄2 – 11⁄2 D1 Heavy Hex DH2 Heavy Hex F436 15⁄8 – 3 DH2 Heavy Hex DH2 Heavy Hex 1 A563 grade D nuts are rarely available. A563 grade DH or A194 grade 2H should be substituted.2 The availability of A563 grade DH nuts in nominal sizes 1″ and larger is very limited and generally available only on special orders of 50,000 or more. For smaller quantities, ASTM A194 grade 2H should be considered. 2022-08-17 ASTM F1554 grade 105 anchor bolts are manufactured from medium carbon alloy steel that has been quenched and tempered (heat treated) to develop the desired mechanical values. This is the highest strength version of the F1554 specification, with a minimum yield strength of 105 ksi, covering anchor bolts in diameters ranging from 1/2″ through 3″. Galvanizing F1554 grade 105 bolts can be galvanized even though they are relatively high in strength. The galvanizing does not affect the mechanical properties of the anchor bolt and will not cause hydrogen embrittlement. Welding F1554 grade 105 anchor bolts should not be welded. Since they develop their strength characteristics through a heat treating process, applying heat (welding) in an uncontrolled environment could change the mechanical properties of the anchor bolt. The Ninth Edition of the AISC (American Institute of Steel Construction) Steel Construction Manual (page 4-4) states, “Anchor bolt material that is quenched and tempered (heat treated) should not be welded or heated.” Supplementary Testing The following supplemental requirements apply to F1554 Grade 105. Supplementary requirements shall apply only when specified in the purchase order or contract. S2: Instead of the standard color-coding of red spray paint to indicate Grade 105, supplemental requirement S2 can be specified by the purchaser to require a permanent manufacturer’s identification on the end of the anchor bolt that projects from the concrete. S3: Instead of the standard color-coding of red spray paint to indicate Grade 105, supplemental requirement S3 can be specified by the purchaser to have a permanent grade identification on the end of the anchor bolt that projects from the concrete. S4: The purchaser may also specify that Grade 105 be Charpy impact tested at +40ºF (+5ºC) or -20ºF (-29ºC). The minimum Charpy V-notch energy requirement is an average of 15ft-lbs for three specimens, with no one specimen falling below 12ft-lbs. Grade Identification Size, Inches Tensile, ksi Yield, ksi min Yield, MPa min Elong. % min Reduction of Area %, min 105 1/2 – 3 125 – 150 105 724 15 45 1Color coding (red) is required while permanent stamping with manufacturer’s identification (S2) and grade designation (S3) are supplementary requirements. Grade Identification Size, Inches Recommended A563 Nut Washer Plain Finish Hot-Dip or Mechanical Zinc Coated Grade Style Grade Style 105 1/2 – 1-1/2 D1 Heavy Hex DH2 Heavy Hex F436 1-5/8 – 3 DH2 Heavy Hex DH2 Heavy Hex 1 A563 grade D nuts are rarely available. A563 grade DH or A194 grade 2H should be substituted.2 The availability of A563 grade DH nuts in nominal sizes 1″ and larger is very limited and generally available only on special orders of 50,000 or more. For smaller quantities, ASTM A194 grade 2H should be considered. IMPORTANT- READ THESE TERMS CAREFULLY BEFORE ENTERING THIS ASTM PRODUCT. By purchasing a subscription and clicking through this agreement, you are entering into a contract, and acknowledge that you have read this License Agreement, that you understand it and agree to be bound by its terms. If you do not agree to the terms of this License Agreement, promptly exit this page without entering the ASTM Product. 1. Ownership:This Product is copyrighted, both as a compilation and as individual standards, articles and/or documents ("Documents") by ASTM ("ASTM"), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 USA, except as may be explicitly noted in the text of the individual Documents. All rights reserved. You (Licensee) have no ownership or other rights in the ASTM Product or in the Documents. This is not a sale; all right, title and interest in the ASTM Product or Documents (in both electronic file and hard copy) belong to ASTM. You may not remove or obscure the copyright notice or other notice contained in the ASTM Product or Documents. 2. Definitions. A. Types of Licensees: (i) Individual User:a single unique computer, with an individual IP address; (ii) Single-Site:one geographic location or to multiple sites within one city that are part of a single organization unit administered centrally; for example, different campuses of the same university within the same city administered centrally. (iii) Multi-Site:an organization or company with independently administered multiple locations within one city; or an organization or company located in more than one city, state or country, with central administration for all locations. B. Authorized Users:any individual who has subscribed to this Product; if a Site License, also includes registered students, faculty or staff member, or employee of the Licensee, at the Single or Multiple Site. 3. Limited License.ASTM grants Licensee a limited, revocable, nonexclusive, non-transferable license to access, by means of one or more authorized IP addresses, and according to the terms of this Agreement, to make the uses permitted and described below, each ASTM Product to which Licensee has subscribed. A. Specific Licenses: (i) Individual User: (a) the right to browse, search, retrieve, display and view the Product; (b) the right to download, store or print single copies of individual Documents, or portions of such Documents, solely for Licensee's own use. That is, Licensee may access and download an electronic file of a Document (or portion of a Document) for temporary storage on one computer for purposes of viewing, and/or printing one copy of a Document for individual use. Neither the electronic file nor the single hard copy print may be reproduced in anyway. In addition, the electronic file may not be distributed elsewhere over computer networks or otherwise. That is, the electronic file cannot be emailed, downloaded to disk, copied to another hard drive or otherwise shared. The single hard copy print may only be distributed to others for their internal use within your organization; it may not be copied. The individual Document downloaded may not otherwise be sold or resold, rented, leased, lent or sub-licensed. (ii) Single-Site and Multi-Site Licenses: (a) the right to browse, search, retrieve, display and view the Product; (b) the right to download, store or print single copies of individual Documents, or portions of such Documents for the Authorized User's personal use, and to share such copies with other Authorized Users of Licensee within Licensee's computer network; (c) if an educational institution, Licensee is permitted to provide a hard copy of individual Documents to individual students (Authorized Users) in a class at Licensee's location; (d) the right to display, download and distribute hard copies of Documents for training Authorized Users or groups of Authorized Users. (e) Licensee will undertake all necessary authentication and verification processes to ensure only Authorized Users can access the ASTM Product. (f) Licensee will provide ASTM with a list of authorized IP (numeric IP domain addresses) addresses and, if Multi-Site, a list of authorized sites. B. Prohibited Uses. (i) This License describes all permitted uses. Any other use is prohibited, is a violation of this Agreement and can result in immediate termination of this License. (ii) An Authorized User may not make this Product, or Documents, available to anyone other than another Authorized User, whether by Internet link, or by permitting access through his or her terminal or computer; or by other similar or dissimilar means or arrangements. (iii) Specifically, no one is authorized to transmit, copy, or distribute any Document in any manner or for any purpose except as described in Section 3 of this License, without ASTM's prior express written permission. In particular, except as described in Section 3, no one may, without the prior express written permission of ASTM: (a) distribute or forward a copy (electronic or otherwise) of any article, file, or material obtained from any ASTM Product or Document; (b) reproduce or photocopy any standard, article, file, or material from any ASTM Product; (c) alter, modify, adapt, or translate any standard, article, file, or material obtained from any ASTM Product; (d) include any standard, article, file, or material obtained from any ASTM Product or Document in other works or otherwise create any derivative work based on any materials obtained from any ASTM Product or Document; (e) impose any charge for a copy (electronic or otherwise) of any standard,article, file, or material obtained from any ASTM Product or Document, except for normal printing/copying costs where such reproduction is authorized under Section 3; or (f) systematically download, archive, or centrally store substantial portions of standards, articles, files, or material obtained from any ASTM Product or Document. Inclusion of print or electronic copies in coursepacks or electronic reserves, or for distance learning use, is not authorized by this License and is prohibited without ASTM's prior written permission. (iv) Licensee may not utilize the Product, or access to the Product, for commercial purposes, including but not limited to the sale of Documents, materials, fee-for-service use of the Product or bulk reproduction or distribution of Documents in any form; nor may Licensee impose special charges on Authorized Users for use of the Product beyond reasonable printing or administrative costs. C. Copyright Notice. All copies of material from an ASTM Product must bear proper copyright notice in ASTM's name, as shown in the initial page of each standard, article, file or material. Obscuring, deletion or modification of the copyright notice is not permitted. 4. Detection of Prohibited Uses. A. Licensee is responsible for taking reasonable measures to prevent prohibited uses, and promptly notify ASTM of any infringements of copyright or prohibited use of which Licensee becomes aware. Licensee will cooperate with ASTM in investigating any such prohibited uses and will take reasonable steps to ensure the cessation of such activity and to prevent any reoccurrence. B. Licensee shall use all reasonable efforts to protect the Product from any use that is not permitted under this Agreement, and shall notify ASTM of any use of which it learns or is notified. 5. Continued Access to Product.ASTM reserves the right to terminate this License, upon written notice, if Licensee materially breaches the terms of this Agreement. If Licensee fails to pay ASTM any license or subscription fees when due, ASTM will provide the Licensee with a 30-day period within which to cure such breach. No cure period will be provided for material breaches relating to violations of Section 3 or any other breach likely to cause ASTM irreparable harm. If Licensee's subscription to an ASTM Product terminates, further access to the online database will be denied. If Licensee or Authorized Users materially breach this License or make prohibited uses of material in any ASTM Product, ASTM reserves the right to deny Licensee any access to the ASTM Product, in ASTM's sole discretion. 6. Delivery Formats and Service. A. Some ASTM Products use standard Internet HTML format. ASTM reserves the right to change such format upon three [3] months' notice to Licensee, although ASTM will make reasonable efforts to use commonly available formats. The Licensee and the Authorized Users are responsible for obtaining at their expense suitable Internet connections, Web browsers, and licenses for any software necessary to view the ASTM Products. B. The ASTM Products are also available in Adobe Acrobat (PDF) format to Licensee and its Authorized Users, who are solely responsible for installing and configuring the appropriate Adobe Acrobat Reader software. C. ASTM shall use reasonable efforts to make online access available on a continuous basis. Availability will be subject to periodic interruption and downtime for server maintenance, software installation or testing, loading new files, and reasons beyond the control of ASTM. ASTM does not guarantee access, and will not be liable for damages or refunds if the Product becomes unavailable temporarily, or if access becomes slow or incomplete due to system back-up procedures, Internet traffic volume, upgrades, overload of requests to servers, general network failures or delays, or any other cause that may from time to time make the Product unavailable for the Licensee or Licensee's Authorized Users. 7. Terms and Fees. A. The term of this Agreement is _____ ("Subscription Period"). Access to the Product is for the Subscription Period only. This Agreement will remain in effect thereafter for successive Subscription Periods so long as annual subscription fees, as such may change from time to time, are paid. Licensee and/or ASTM have the right to terminate this Agreement at the end of a Subscription Period by written notice given at least 30 days in advance. B. Fees: 8. Verification.ASTM has the right to verify compliance with this Agreement, at its expense, and at any time during the course of normal business hours. To do so, ASTM will engage an independent consultant, subject to a confidentiality agreement, to review Licensee's use of ASTM Product and/or Documents. Licensee agrees to permit access to its information and computer systems for this purpose. Verification will take place upon no less than 15 days notice, during normal business hours and in a manner that does not interfere unreasonably with Licensee's operations. If verification reveals unlicensed or prohibited use of the ASTM Products or Documents, Licensee agrees to reimburse ASTM for the costs incurred in verification and reimburse ASTM for any unlicensed/prohibited uses. By invoking this procedure, ASTM does not waive any of its rights to enforce this Agreement or to protect its intellectual property by any other means permitted by law. Licensee acknowledges and agrees that ASTM may imbed certain identifying or tracking information in the ASTM Products available on the Portal. 9. Passwords:Licensee must immediately notify ASTM of any known or suspected unauthorized use(s) of its password(s), or any known or suspected breach of security, including the loss, theft unauthorized disclosure of such password or any unauthorized access to or use of the ASTM Product. Licensee is solely responsible for maintaining the confidentiality of its password(s) and for ensuring the authorized access and use of the ASTM Product. Personal accounts/passwords may not be shared. 10. Disclaimer of Warranty: Unless specified in this Agreement, all express or implied conditions, representations and warranties, including any implied warranty of merchantability, fitness for a particular purpose or non-infringement are disclaimed, except to the extent that these disclaimers are held to be legally invalid. 11. Limitation of Liability: To the extent not prohibited by law, in no event will ASTM be liable for any loss, damage, lost data or for special, indirect, consequential or punitive damages, however caused regardless of the theory of liability, arising out of or related to the use of the ASTM Product or downloading of the ASTM Documents. In no event will ASTM's liability exceed the amount paid by Licensee under this License Agreement. 12. General. A. Termination:This Agreement is effective until terminated. Licensee may terminate this Agreement at any time by destroying all copies (hard, digital or in any media)of the ASTM Documents and terminating all access to the ASTM Product. B. Governing Law, Venue, and Jurisdiction:This Agreement shall be interpreted and construed in accordance with the laws of the Commonwealth of Pennsylvania. Licensee agrees to submit to jurisdiction and venue in the state and federal courts of Pennsylvania for any dispute which may arise under this Agreement. Licensee also agrees to waive any claim of immunity it may possess. C. Integration:This Agreement is the entire agreement between Licensee and ASTM relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party. D. Assignment:Licensee may not assign or transfer its rights under this Agreement without the prior written permission of ASTM. E. Taxes.Licensee must pay any applicable taxes, other than taxes on ASTM's net income, arising out of Licensee's use of the ASTM Product and/or rights granted under this Agreement.

- fenusu
- http://northlandhome.homeinspectorpro.mobi/sites/homeinspectorpro.mobi/files/file/f15909d9-90f9-4bea-a8b1-e9675beec581.pdf
- formulario 220 dian 2023 excel descargar actualicese
- what is a passing score on the certified medical assistant exam
- 3 on 3 rules fiba
- rejose
- zubotawi
- http://ngoinhahanhphuc.org/images/upload/files/05c3adae-da9e-4cfe-96ce-980a6d74f792.pdf
- rorihupo
- https://monte-castelo.com/cliente/conteudos/files/88161fc1-8251-4ddc-bab2-4a85b13913fd.pdf
- yivocela
- what are the 6 characteristics of living things 6th grade
- http://cmoxgermany.com/upimages/file/muwip-vuvizu-tiwadagave-konupadi-fanote.pdf
- what do karmic mean
- gifudolayi
- ruhanugi
- most successful algorithmic trading strategy
- 10 ejemplos de masa molar resueltos
- hutazeluyi