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| <i>For the attention of:</i> | | | |
|------------------------------|---|-----------------|---|
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| Commercial | | Contracts | ✓ |
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15th August 2012

ALL MEMBERS MEMORANDUM No 191-12

SPECIFYING GALVANIZED AND SHERARDIZED BOLTING ASSEMBLIES

The introduction of 'bolting assemblies' in BS EN 15048 for non-preloaded bolts and BS EN 14399 for preloaded bolts has caused some confusion with members over whether or not they should specify higher grade nuts when ordering galvanized and sherardized bolts.

To accommodate the thickness of zinc it is normal practice to over-tap the nut thread. This reduces the strength of the nut and the overall strength of the nut and bolt assembly. To improve the strength of the assembly manufacturers use either a thicker nut (increasing the number of threads between the nut and the bolt in the assembly) or a higher grade nut. Thicker nuts are not generally available and therefore it is normal practice for manufacturers to fit a higher grade nut.

When ordering CE marked, galvanized and sherardized bolting assemblies to BS EN 15048 and BS EN 14399 the following combinations may be supplied:

BS EN 15048 – Non-preloaded bolting assemblies

1. Property class 8.8 bolts, assembled with property class 10 nuts
2. Property class 10.9 bolts, assembled with property class 12 nuts

BS EN 14399 – Preloaded bolting assemblies

1. Property class 8.8 bolts, assembled with property class 8 nuts. In this option the nuts are supplied in accordance with BS EN 14399-3 for hot dip galvanizing and have higher hardness limits and a different tolerance class to self-colour property class 8 nuts to BS EN 14399-3
2. Property class 8.8 bolts, assembled with property class 10 nuts
3. Property class 10.9 bolts, assembled with property class 10 nuts. The grade 10 nuts according to BS EN 14399-3 have been developed to give sufficient strength after over-tapping.

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All of the above bolt, nut combinations are acceptable. Provided the assembly is properly CE marked and supplied in accordance with the correct standard, either BS EN 15048 or BS EN 14399, there is no need to specify a higher grade when ordering galvanized and sherardized bolting assemblies.

Dr D. B. Moore
Director of Engineering
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