

钢板B300TP宝钢供应新型耐磨钢

产品名称	钢板B300TP宝钢供应新型耐磨钢
公司名称	上海强晟钢供应链管理有限公司
价格	.00/个
规格参数	
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产品详情

Q/BQB 616—2018 Q/BQB 616 - 2018 Supersedes BZJ 611 - 2013 English Version High strength steel plates for welded structure Q/BQB 616—2018 I Foreword This standard is drafted in accordance with the rules given in the GB/T 1.1—2009 (Directives for standardization-Part1: Structure and drafting of standards). This standard is drafted according to the market demand, considering the practical condition in Baosteel. This standard replaces BZJ 611 - 2013 " High strength steel plates for welded structure ". In addition to a number of editorial changes, the following technical deviations have been made with respects to the BZJ 611 - 2013 (the previous edition). ——Add references GB/T 20124 and GB/T 20125, the dated of GB/T 2975 in normative references; ——Extend the thickness range of some steel grades, and add the chemical composition and property correspondingly; ——Add grades BWELDY620QL2, BWELDY620QL4 and BWELDY620QL6, and corresponding technical requirements; ——Add the specification for higher accuracy of flatness; ——Tighten the requirement for the content of Mo, V and Ceq for all grades; ——Add the specification that if the performance of bending test can be guaranteed, the bending test may be omitted; ——Tighten the specification of impact property; ——Add the specification that if welding repairing is needed, this shall be agreed between the manufacturer and the purchaser; ——Clarify the sampling position of tensile test pieces and impact test pieces; ——Improved the specification of sampling and retesting for the test unit of impact test. This standard was jointly proposed by Manufacturing Management Department. This standard was jointly prepared by Manufacturing Management Department. This standard is under the jurisdiction of Manufacturing Management Department, this standard is the direct responsibility of Manufacturing Management Department. This standard was drafted by: Huang jinhua. This edition has been approved on Jan.15, 2018, and validated on Apr.10, 2018. The Chinese text of this standard shall be deemed the original. The English version is only for information. In the event of any dispute or misunderstanding as to the interpretation of the language or terms of this specification, the Chinese language version shall be prevail. Q/BQB 616—2018 1 High strength steel plates for welded structure 1 Scope This standard specifies dimensions, shape, technical requirements, testing and inspection, marking, and inspection certificate of high strength thick steel plates for welded structure. This standard is applicable to the high strength thick steel plates for welded structure manufactured by BAOSTEEL. 2 Normative references The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies.

For undated references, the latest edition of the referenced document (including any amendments) applies. GB/T 223 Methods for chemical analysis of iron, steel and alloy GB/T 228.1 Metallic materials – Tensile testing – Part 1: Method of test at room temperature GB/T 229 Metallic materials – Charpy pendulum impact test GB/T 232 Metallic materials – Bend test GB/T 2970 Method for ultrasonic testing of thicker steel plates GB/T 2975-1998 Steel and Steel Products--Location and preparation of test pieces for mechanical testing GB/T 4336 Carbon and Low-Alloy Steel - Determination of Multi-Element Contents - Spark discharge atomic emission spectrometric method (Routine Method) GB/T 20066-2006 Steel and Iron: Sampling and preparation of samples for the determination of chemical composition GB/T 20123 Steel and Iron - Determination of total carbon and sulfur content infrared absorption method after combustion in an induction furnace (Routine Method) GB/T 20124 Steel and Iron - Determination of nitrogen content thermal conductimetric method after fusion in a current of inert gas (Routine Method) GB/T 20125 Low-Alloy Steel - Determination of multi-element contents - inductively coupled plasma atomic emission spectrometric method Q/BQB 600 General technical requirements for steel plate 3 General technical requirements Unless other specifications have been shown in this standard, the steel plate delivered by this standard shall comply with the corresponding requirements of Q/BQB 600. 4 Classification and Code 4.1 The steel grade, the nominal thickness, and the application of steel plate are shown in Table 1. Table 1 Steel grade Nominal thickness mm Application BWELDY620QL2, BWELDY620QL4, BWELDY620QL6 BWELDY700QL2, BWELDY700QL4 8 to 100 Used for excavators, forklifts, concrete pump trucks, truck cranes and other construction machinery that require good welding performance and comprehensive mechanical properties, as well as the hydraulic supports of coal mining machinery, large cranes and other mines, port machinery structures. BWELDY900QL2, BWELDY900QL4 BWELDY960QL2, BWELDY960QL4 10 to 60 4.2 The higher flatness accuracy of steel plate, PF.S, is classified as two levels, PF.S1 and PF.S2. Q/BQB 616—2018 2 5 Dimensions, shapes, mass The higher flatness accuracy levels PF.S1 and PF.S2 of trimmed edge steel plates shall conform to Table 2. Other requirements of dimensions, shapes, mass, and permissible tolerance shall conform to Q/BQB 600. Table 2 Measurements in length Tolerances for different levels of higher flatness accuracy not greater than PF.S1 PF.S2 1000 mm 7 mm 5 mm 6 Technical requirements 6.1 Steel grade and chemical composition The steel grade and the chemical composition (heat analysis) shall comply with the requirement in Table 3. Table 3 6.2 Delivery condition Steel plates are delivered in the quenched and tempered condition. 6.3 Mechanical property and processing performance 6.3.1 The mechanical properties and processing performance of steel plate shall comply with the requirement in Table 4. 6.3.2 After bending test, the outer surface of the test piece shall be free from visible cracks. If the performance of bending test can be guaranteed by the manufacturer, the bending test may be omitted. 6.3.3 The value of Charpy absorption energy shall be taken from the average of three test pieces. It is acceptable that one out of three test values is lower than the specified value but not less than 70% of the specified value. 6.3.4 Charpy impact test is only applicable to the steel plate with thickness not less than 6 mm. When the impact test is made on the steel plate with thickness not less than 12 mm, the standard test specimen of Steel grade Chemical composition a (heat analysis) % C Si Mn P S Nb Ti V Alt Others Ce_q b Thickness mm 50 > 50 BWELDY620QL2 BWELDY700QL2 0.18 0.50 1.60 0.025 0.015 0.05 0.05 0.05 0.020 Cr 0.80 Mo 0.60 Ni 2.00 Cu 0.30 B 0.005 N 0.015 0.57 0.62 BWELDY620QL4 BWELDY620QL6 BWELDY700QL4 0.020 0.010 BWELDY900QL2 0.20 0.50 1.70 0.025 0.015 0.05 0.05 0.05 0.020 0.62 BWELDY900QL4 0.020 0.010 0.67 BWELDY960QL2 0.20 0.50 1.70 0.025 0.015 0.05 0.05 0.05 0.020 0.65 BWELDY960QL4 0.020 0.010 0.70 a Other alloying elements may be added when needed. b Ce_q = C + Mn / 6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15. Q/BQB 616—2018 3 10.0 mm × 10.0 mm × 55 mm shall be used, and the test result shall comply with the specified value in the table; when the impact test is carried out on steel plate with thickness not less than 6 mm but less than 12.0 mm, the auxiliary test pieces of 7.5 mm × 10.0 mm × 55 mm or 5.0 mm × 10.0 mm × 55 mm shall be applied, and the test result shall not be less than 75% or 50% of the specified value given in the table, respectively. 6.3.5 If the result of Charpy impact test does not meet the specified requirements, three other test pieces may be taken on the same sampled product for testing. At this time, the average value of these six test pieces should not be less than the specified value. No more than two out of six values are allowed to be less than the specified value, and only one value is allowed to be less than 70% of the specified value. Table 4 Steel grade Tensile test Impact test b 180 ° bend test c b = 2a (a = thickness of test piece, b = width of test piece, D - diameter of the former end) Upper yield Strength a MPa Tensile strength MPa Elongation after fracture, %, (L₀ = S₀ 5.65) Temperature Charpy absorption energy KV₂ J Thickness mm Thickness mm 50 > 50 50 > 50 BWELDY620QL2 620 600 700 to 890 700 to 890 15 -20 47 BWELDY620QL4 -40 34 D = 3a BWELDY620QL6 -60 34

BWELDY700QL2	700	670 770 to 940 760 to 930	14 -20	47 D = 3a BWELDY700QL4 -40	34
BWELDY900QL2	900	850 940 to 1150 890 to 1150	12 -20	34 D = 3a BWELDY900QL4 -40	34
BWELDY960QL2	960	910 980 to 1150 930 to 1150	12 -20	34 D = 3a BWELDY960QL4 -40	34 a

The test piece taken transversely is applied to tensile test; when definite yield phenomenon is not present, the yield strength values apply to the Rp0.2. b The test piece taken longitudinally is applied to tensile test, and the Charpy test piece is the standard test piece. C The test piece taken transversely is applied to bend test. 6.4 Surface quality If welding repairing is necessary, it shall be agreed between the manufacturer and the purchaser and indicated in the order. Other requirements of surface quality shall conform to Q/BQB 600. 6.5 Ultrasonic test If required by the purchaser, upon the agreement between the manufacturer and the purchaser indicated in the order, ultrasonic test may be performed on each plate individually. The ultrasonic test method shall comply with GB/T 2970, and the accepted level shall be indicated in the order. 7 Inspection and testing 7.1 When selecting the specified inspection and test, the type of inspection document shall comply with the requirement of 6.2 to 6.4. 7.2 The number of test pieces, the sampling method and the test method required by the inspection items for each test unit of steel plate shall comply with the requirements in Table 5. Q/BQB 616—2018 4 Table 5 No. Inspection item Number of test piece Sampling method b Test method 1 Chemical analysis a 1 per heat GB/T 20066 GB/T 223 , GB/T 4336 , GB/T 20123 , GB/T 20124 or general method 2 Tensile test 1 When thickness ≤ 25mm, GB/T 2975 Figure A10 a (full thickness plate type) Thickness > 25mm to ≤ 50mm, GB/T 2975 Figure A10 a or d Thickness > 50mm, GB/T 2975 Figure A10 d (1/4t bar type) GB/T 228.1 3 Bend test 1 GB/T 2975 GB/T 232 4 Impact test 1 set (3 pieces) Thickness ≤ 40mm, GB/T 2975 Figure A11 a (near to surface) Thickness > 40mm, GB/T 2975 Figure A11 b (1/4t) GB/T 229 5 Ultrasonic test (agreed) Each plate - GB/T 2970 a At the time of arbitration, the test method shall comply with GB/T 223. b The sample is allowed to be shearing or flame cutting, but the size of the sample must be appropriate to enable the sample to be away from the hardened or heat affected zone caused by shearing or flame cutting. The sampling position shall be as close as possible to the specified positions when sampling at those exact positions is not feasible. 7.3 Sampling frequency 7.3.1 Sampling frequency for chemical analysis Heat analysis shall be adopted for the chemical analysis to each heat individually. 7.3.2 Sampling frequency for mechanical properties and processing performance Each test unit shall consist of steel plates which the maximum mass is 40 tons, plates have the same heat number, the same grade, and the same tensile strength which regular , the difference between the maximum and the minimum thickness is not greater than 5 mm. The impact test piece shall be taken from the thickest steel plate in the test unit. 7.3.3 Upon the agreement between the manufacturer and the purchaser, the rule for setting test unit may be additionally determined. 7.4 Re-test of impact test If the result of impact test do not meet the specified requirement, the tested but failed plate cannot be accepted; however, the other steel plates with the same thickness as the sampled product shall be subjected to impact test and accepted individually. The steel plate with other thicknesses shall be set as a new test unit and submitted for the impact test and acceptance.