

**DALIAN FANGWEI MACHINERY MANUFACTURING CO.,LTD.****CE TEST REPORT**

Applicant :	DALIAN FANGWEI MACHINERY MANUFACTURING CO., LTD. 135 Aerbin Village, Dengshahe Town, Jinzhou District, Dalian City, Liaoning Province, China
Manufacturer :	DALIAN FANGWEI MACHINERY MANUFACTURING CO., LTD. 135 Aerbin Village, Dengshahe Town, Jinzhou District, Dalian City, Liaoning Province, China
Product Name :	pipe repair clamp
Model :	DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN225, DN250, DN300, DN350, DN400, DN450, DN500, DN600, DN700, DN800, DN900, DN1000, DN1100, DN1200, DN1400, DN1500, DN1600
Trade Mark :	/
Test Laboratory :	SHENZHEN BVT TESTING TECHNOLOGY CO., LTD. 1/F, Area A, Huachuangda Qianhai Maker Technology Innovation Base, Longjing 1st Road, Xin'an Street, Bao'an District, Shenzhen, China
Test Date :	1th, March, 2021 to 4th, March, 2021
Date of Report :	4th, March, 2021
Report No. :	BVT20200713006R-01
Special Remarks :	This is the change test report . The original test report was issued on 15, July, 2020. The content of this change is to add product model . The original certified product model was DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN225, DN250, DN300 . The latest product model after this change is DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN225, DN250, DN300, DN350, DN400, DN450, DN500, DN600, DN700, DN800, DN900, DN1000, DN1100, DN1200, DN1400, DN1500, DN1600 .

**TEST REPORT****EN 1092-2:1997**

Flanges and their joints—Circular flanges for pipes, valves, fittings and accessories, PN designated—Part 2: Cast iron flanges

EN 14525:2004

Ductile iron wide tolerance couplings and flange adaptors for use with pipes of different materials: ductile iron, Grey iron, Steel, PVC-U PE, Fibre-cement

Report reference No. : BVT20200713006R-01

Prepared by (+ signature)

Reviewer (+ signature)

Approved & Authorized Signer (+ signature)



Tony

Engineer (Tony)

Michael

Supervisor (Michael)

Vincent

Manager (Vincent)

Date of issue : 4th, March, 2021

Testing laboratory

Name : SHENZHEN BVT TESTING TECHNOLOGY CO.,LTD.

Address : 1/F, Area A, Huachuangda Qianhai Maker Technology Innovation Base,
Longjing 1st Road, Xin'an Street, Bao'an District, Shenzhen, China

Testing location : SHENZHEN BVT TESTING TECHNOLOGY CO.,LTD.

Client

Name : DALIAN FANGWEI MACHINERY MANUFACTURING CO., LTD.

Address : 135 Aerbin Village, Dengshahe Town, Jinzhou District, Dalian City,
Liaoning Province, China

Test specification

Standard : EN 1092-2:1997 ; EN 14525:2004

Test procedure : Compliance with EN 1092-2:1997 and EN 14525:2004

Procedure deviation : N.A.

Non-standard test method : N.A.

**Test item**

Description : pipe repair clamp

Trademark : /

Model and/or type reference : DN50, DN65, DN80, DN100, DN125, DN150, DN200,
DN225,DN250, DN300, DN350, DN400, DN450, DN500, DN600,
DN700, DN800, DN900, DN1000, DN1100, DN1200, DN1400,
DN1500, DN1600

Manufacturer : DALIAN FANGWEI MACHINERY MANUFACTURING CO., LTD.

Address : 135 Aerbin Village, Dengshahe Town, Jinzhou District, Dalian City,
Liaoning Province, China

Rating(s) : N/A

Test case verdicts

Test case does not apply to the test object : N(.A.)

Test item does meet the requirement : P(ass)

Test item does not meet the requirement : F(ail)

General remarks

This test report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

“(See remark #)” refers to a remark appended to the report.

“(See appended table)” refers to a table appended to the report.

**EN 1092-2:1997**

Clause	Requirement – Test	Result - Remark	Verdict
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3	Definitions		P
3.1	Flange Flat circular end of a pipe component extending perpendicular to its axis, with bolt holes equally spaced on a circle		P
3.2	DN (Nominal size)		P
3.3	PN		P
3.4	Ductile iron A cast iron in which graphite is present substantially in spheroidal form		P
3.5	Grey iron A cast iron in which graphite is present substantially in lamellar form		P
3.6	Malleable iron A cast iron in which graphite is present substantially in nodular form (temper carbon), and can be partially or wholly decarburized		P
3.7	Joint A connection between the flanged ends of piping systems components in which a gasket is used to effect a seal		P
4	Designation and types		P
4.1	Range of DN The range of DN applicable to each flange type and to each PN shall be as specified in tables 2 to 4 as appropriate		P
4.2	Range of PN designations		P
4.3	Types of flanges		P
4.4	Standard designation		P
4.5	Information to be supplied by the purchaser		P
5	General requirements		P
5.1	Flange material		P

**EN 1092-2:1997**

Clause	Requirement – Test	Result - Remark	Verdict
5.2	Repairs by welding Where not otherwise prohibited by the applicable material standard, repairs by welding are permitted when there is a proven method. All welding shall be carried out in accordance with a written procedure		P
5.3	Bolting The bolting shall be chosen by the user according to the pressure, temperature, flange material and gasket. For joints comprising at least one grey iron flange it is recommended that bolting having a yield strength not exceeding 240 N/mm ² should be used		P
5.4	Gaskets The gaskets are not within the scope of this standard. For information on types, dimensions and types of gaskets see EN 1514		P
5.5	Pressure/Temperature (p/T) ratings		P
5.5.1	General		P
5.5.2	P/T rating offlanged joints Where two flanges in a flanged joint do not have the same p/T rating, the p/T rating of the joint at any temperature shall not exceed the lower of the two flange ratings at that temperature		P
5.6	Dimensions		P
5.7	Flange facings		P
5.7.1	Types of facings		P
5.7.2	Jointing face finish		P
5.8	Spot facing or back facing		P
5.9	Tolerances		P
5.10	Marking and stamping		P
5.10.1	Marking		P
5.10.2	Stamping		P

**EN 1092-2:1997**

Clause	Requirement – Test	Result - Remark	Verdict
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5.10.3	Omission of markings		P
5.11	Quality assurance		P
5.11.1	General		P
5.11.2	Quality assurance system		P

**EN 14525:2004**

Clause	Requirement – Test	Result - Remark	Verdict
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3	Terms and definitions		P
4	Technical requirements		P
4.1	General		P
4.1.1	Diameter range		P
4.1.2	Surface condition and repairs		P
4.1.3	Types of joints and interconnection		P
4.1.3.1	General		P
4.1.3.2	Flanged joints		P
4.1.3.3	Flexible joints		P
4.1.3.4	Mechanical properties of bolts and nuts		P
4.1.3.5	Materials in contact with water intended for human consumption		P
4.2	Dimensional requirements		P
4.2.1	Wall thickness		P
4.2.2	Joint gap and depth of engagement		P
4.3	Mechanical properties of ductile iron		P
4.3.1	Tensile properties		P
4.3.2	Hardness		P
4.4	Coatings		P
4.4.1	General		P
4.4.2	Coating of ductile iron components		P
4.4.3	Coating of bolts and nuts		P
4.5	Product information		P

**EN 14525:2004**

Clause	Requirement – Test	Result - Remark	Verdict
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4.5.1	Marking requirements		P
4.5.2	Additional information		P
4.6	Leak tightness		P
4.6.1	Couplings and flange adaptors		P
4.6.2	Joints		P
5	Performance requirements for joints		P
5.1	General		P
5.2	Pressure rating		P
5.3	Flexible joints		P
5.3.1	General		P
5.3.2	Angular deflection		P
5.3.3	Test conditions		P
5.3.4	Test parameters		P
5.3.4.1	Annulus		P
5.3.4.2	Pipe thickness		P
5.3.4.3	Shear		P
5.4	Restrained flexible joints		P
5.5	Flanged joints		P
6	Test methods		P
6.1	Tensile testing		P
6.1.1	Samples		P
6.1.2	Preparation of test bar		P

**EN 14525:2004**

Clause	Requirement – Test	Result - Remark	Verdict
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6.1.3	Apparatus and test method		P
6.1.4	Test results		P
6.2	Brinell hardness		P
6.3	Works leak tightness test		P
6.3.1	General		P
6.3.2	Air test		P
6.3.3	Hydrostatic pressure test		P
7	Performance tests		P
7.1	Leak tightness of joints to positive internal pressure		P
7.1.1	Coupling		P
7.1.2	Flange adaptor		P
7.2	Leak tightness of joints to negative internal pressure		P
7.3	Leak tightness of joints to dynamic internal pressure		P
Annex A	Outside diameters of existing pipes		P
Annex B	Quality assurance		P
B.1	General		P
B.2	Performance test		P
B.3	Manufacturing process		P
B.3.1	Quality Control		P
B.3.2	Tensile strength		P

ANNEX A:

Photo-documentation



Photo 1 (DN50)

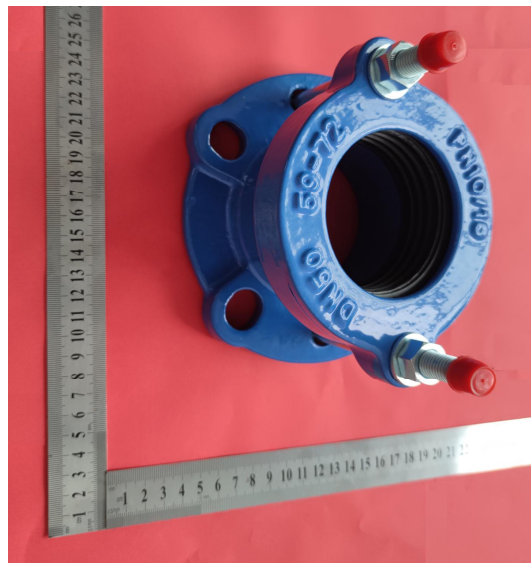


Photo 2 (DN50)

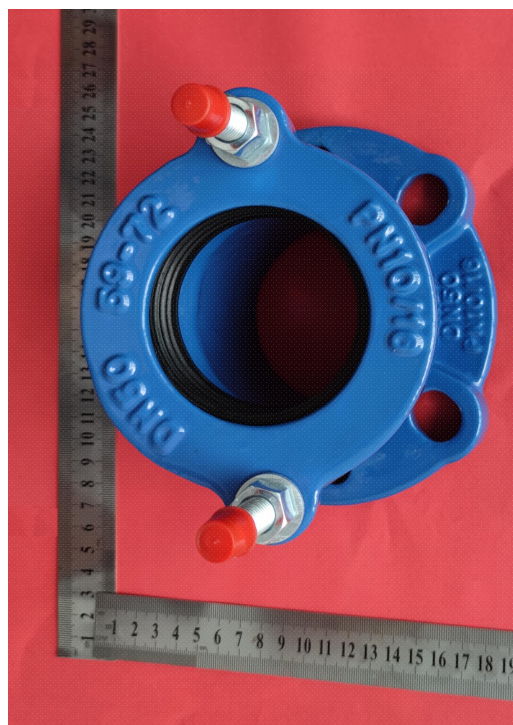


Photo3 (DN50)

End of the report